

The chapel and enclosure on the Brough of Deerness, Orkney: survey and excavations, 1975–1977

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ABSTRACT

Excavations took place at this site in 1975–6, followed by a survey in 1977, at the invitation of the Inspectorate of Ancient Monuments, as clearance of turf and rubble had previously revealed a hoard of post-medieval coins. Further coins were found, which relate to the period after usage of the chapel had ceased: the group is interpreted in votive terms and related to accounts of pilgrimage to the site. The unicameral chapel itself had both a timber and a stone phase. The timber chapel probably had a stone 'cladding' and additions to the stone chapel at one stage included at least one stone bench. Little dating evidence was forthcoming, but a 10th-century coin was found in an intermediate stage between the two phases. The area around the chapel was enclosed, in the later phase, by a rectangular low stone wall, and in the earlier by a series of gullies and a possible timber fence. Few burials were found: two infant graves from the timber phase, one adult, one child and two infants from the stone phase. This raises questions about the status of the site, sometimes seen as an early Christian monastery. The survey revealed more buildings than recognized before, and a regularity of layout, which may be of more than one phase. Interpretation as a Norse monastery is referred to, and the possibility is raised that the buildings may be secular, surrounding a chapel dating from the Norse period, rather than earlier.

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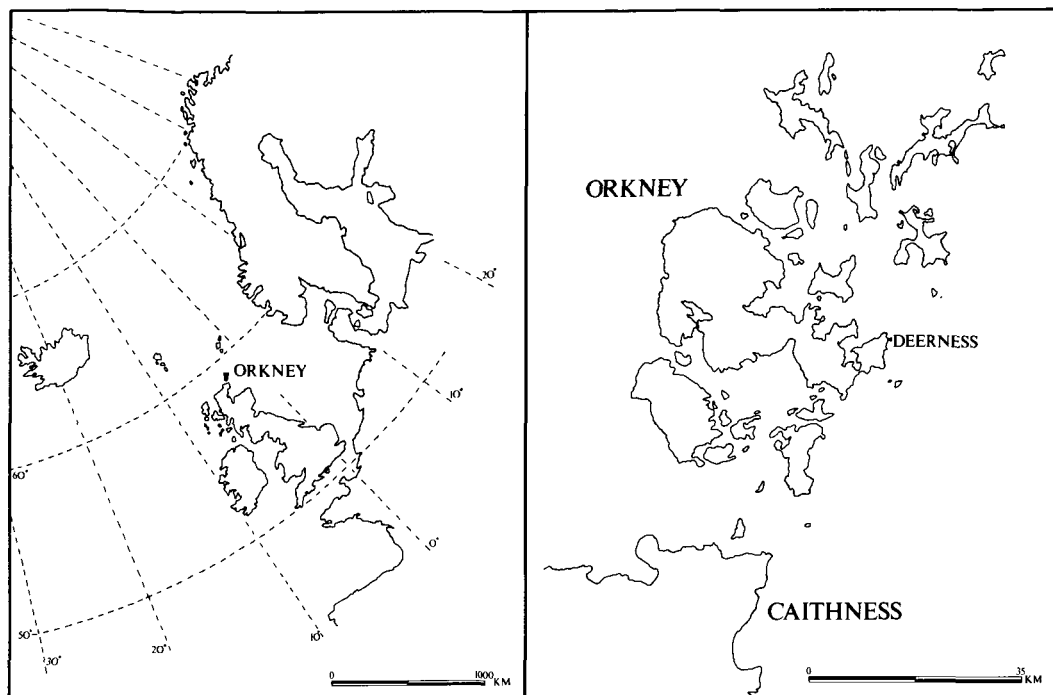
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INTRODUCTION

The Brough of Deerness is at the north-eastern tip of the Mainland of Orkney (illus 1), and on its grass-covered peninsula is an archaeological site in the care of the Secretary of State for Scotland.

PREVIOUS ARCHAEOLOGICAL WORK

Although the Brough of Deerness had been noted by several authorities before the 19th century (fiche 2: C7–9), the first serious archaeological fieldwork on the site was carried out in 1866 by Sir



ILLUS 1 Deerness: location

Henry Dryden (fiche 2: C9–11). His work consisted mainly of a survey of the whole site, together with an examination of the chapel. He established a survey beacon on the east wall, which was, at the time, standing to a maximum height of 6 ft 3 in (1.905 m) above the ground surface. The building was a small rectangular structure aligned east–west, and by digging at the west end, Dryden located the doorway, and noted that the interior was covered with debris. His drawings indicate that the floor was about 1 ft 8 in (0.508 m) below the ground-surface. Dryden is the first person clearly recorded as having dug into the chapel, in which he located an aumbry in the north wall, and traces of a window in the east wall (illus 65 & 66). He clearly marked the yard around the chapel, stating that only the foundations remained and that ‘the entrance into this is not evident’. Dryden also produced the first survey of the site (illus 63). On it, as also in his description, he distinguished ‘at least 18 huts’ and a ‘tank or well’ south of the chapel. There is no hint that he carried out any excavation of these, although he was of the opinion that ‘these were for the use of devotees who used this as a place of pilgrimage’. He also recorded stones along the southern edge of the Brough, which he took to be part of a wall. Although it is not marked on his plan, he clearly noted that there was an entrance here.

The wall and bank was dug into in April 1878 by James W Cursiter to verify certain points for Joseph Anderson’s description of the site published in 1881 (fiche 2: D2–3). Cursiter discovered that the bank was about 3 ft (0.914 m) thick and faced only on the outer face, but he traced it for 86 yds (78.6 m). In the summer of 1878, Cursiter examined the chapel, but it is not clear whether his examination included excavation.

In the 20th century, before the recent work, only two significant pieces of fieldwork had been carried out on the site. In 1930, the Royal Commission carried out a completely new survey (fiche 2: E9–12). They had little to add concerning the chapel and yard, but clarified a number of matters concerning the buildings around the yard. Their survey was undoubtedly more accurate than

Dryden's although the relationship of the buildings on the two plans is immediately apparent (illus 67). In particular, they distinguished between two groups of 'domestic buildings': the rectangular buildings north, east and west of the chapel, which Dryden recorded, and 'the cluster of twenty-one circular huts at the SE corner'. The latter they saw as possibly earlier than the chapel, but the rectangular huts contemporary with and later than it. They specifically recorded that 'no trace is left of the entrance gate', although the outer wall or 'breast-work' was seen as extending for about 260 ft (79.2 m) across the southern edge of the Brough. A heap of flagstones to the north of the wall were thought by them to be most likely the debris remaining from Cursiter's excavation, although they noted Cursiter's recollection that most of the debris was cast over the cliff. The alternative suggestion was that it may represent the remains of a later shelter. The Ordnance Survey, during regular checking of monuments for recording on their maps, went over previous work and in 1973 produced an up-dated survey of the site. Their main addition was of the entrance opposite the land-bridge spur, which was not recorded in 1930 (fiche 2: F13-14).

Since the survey of 1930, work has been hampered by the lack of grazing on the Brough. Dr R G Lamb did not attempt in 1971 to carry out a new survey because of the height of the grass: heavy reliance had to be placed upon the 1930 plan (fiche 2: F13). Also, when detailed examination was made of the site by Ordnance surveyors and Dr Lamb, it was evident that the site was in a sorry mess: 'the oratory has evidently deteriorated, its walls, except for the north wall, being mere heaps of rubble, and the rectangular enclosure around it being quite invisible' (fiche 2: F13). Even in 1951, Dr Hugh Marwick commented on its decay and neglect (fiche 2: F1), and it is evident that much destruction had taken place in the Second World War.

PRELIMINARY WORK ON SITE

Preliminary clearance of rubble debris in and around the visible stone chapel on the site was undertaken by the maintenance squad for Ancient Monuments in Orkney in March 1974, prior to consolidation under the direction of the Inspectorate. The dilapidation was evidently in part due to natural processes, but also to the use of the site for target-practice. Dr Lamb recorded that the chapel was used as a target by the Navy during the First World War, interpreting the circular depressions as shell-holes (fiche 2: F13, F14); Dr L R Laing also noted the use of the site for target-practice (fiche 2: G4). A number of fragments of casing from ammunition were recovered during excavation of the Enclosure area, especially to the west of the chapel and embedded in the western Enclosure wall. The eastern corners, which face out to sea, were damaged. But also the western, landwards corners were damaged, and along the south wall, between 0.5 and 1 m above the ground-surface, were a series of holes. It is generally known that a road was built across the 'moors' of Deerness, to the south of the Brough, during the Second World War. This so-called 'Burma Road' (Bailey 1971, 135) culminates in a 'roundabout', from which a very good view may be had of the Brough from a distance. Military activity in this area of the peninsula may have resulted in the site being shelled from the landward side by artillery during the War. Correspondence with Headquarters Scotland (Army), Imperial War Museum, and the Royal Artillery Institution has, however, failed to locate any surviving records of troop movements and activities in this area.

A series of colour photographs taken by Mr J Drever, DoE foreman, at the commencement of work shows clearly that considerable collapse outward of the walls had occurred. Piles of rubble and loose stony material, partially overgrown in places, were to be seen at the south-west corner, the south-east corner, and against the whole of the exterior of the east wall. The work of the squad consisted initially of clearing these piles and other loose material (illus 52). Indeed, during the process, the line of the west wall of the chapel became apparent, together with the entrance in the west wall (illus 22). Beyond the piles, the area was covered by turf and freely growing vegetation. Unfortunately, in the process of clearance of the piles, the upper archaeological layers around the chapel were removed – as can clearly be seen in both the plans of Phases D1-2 and D3-4 and E (illus 18 & 21) and pre-excavation photographs.

Inside the chapel, during clearance of further rubble and loose material, the squad discovered 16 coins dating from between 1642 and 1806 (RF nos 11, 12 & 19-32), and it was evident that the work of clearance was disturbing layers of collapse within the chapel not attributable to the most recent past and the military activity (illus 53). Although it is clear that material was removed to a greater depth at the west end,

it cannot be assumed that the coins came exclusively from this area, for some clearance took place elsewhere in the chapel. Large boulders were removed from the area of what was evidently a stone altar against the east wall (illus 54). This was *not* disturbed, and indeed protection afforded to it until the onset of excavations (illus 54). At the western end of the chapel clearance of rubble to a lower level revealed the clear remains of the western end of a stone bench against the south wall of the chapel. There may be a hint of a similar bench to the north, but the loose large stones could equally well be tumble (see illus 53).

The Department of the Environment, Ancient Monuments Branch decided that further clearance should be carried out under controlled archaeological conditions. Two further coins, from the 17th century, were found during preliminary inspection of the site by C D Morris (RF nos 1 & 2), and an informant reported to E W Marwick that six half-pennies had also been found by visitors to the chapel in 1974 (fiche 2: G8–9). These were datable to the period 1740–90, but two others were indecipherable. Marwick also recorded that yet another Deerness informant knew of 14 coins being found in recent years; they ranged in date between the 1740s and 1860.

Apart from the coins, no other finds were made during clearance on the site, but all stones of a size suitable for use in reconstruction were retained by the squad. In view of the numbers of inscribed stones found during excavation at the chapel-sites of St Ninian's Isle, Shetland (Thomas 1973) and Ardwall Isle, Kirkcudbright (Thomas 1967), all these stones were re-examined at the beginning of the excavation in 1975. No inscribed stones came to light, and, although the smaller material had not been retained by the squad, the further absence of such from the excavations tended to raise questions about the status of the area around the chapel.

EXCAVATION AREAS (illus 46, fiche 3: F14)

As the chapel was in an extreme state of disrepair, considerable consolidation work was required. As this would necessarily involve disturbance of the associated stratigraphy, complete excavation within and around the walls of the chapel took place. In September 1975, four trenches 1.25 m wide were placed at right-angles to the walls of the chapel extending outwards to locate the perimeter for the enclosure. Since the enclosure appeared to be defined by a low, stone wall, this was soon achieved, and the sections of the trenches then offered a useful sequence through the deposits outside the chapel walls (illus 95). One of the trenches – that to the east – examined, in an area 2 m by 1.25 m, the deposits immediately adjacent to, but outside the eastern stone enclosure wall. However, no area excavation took place beyond the enclosure wall, and as no buildings either overlay or underlay the wall, it was not possible to establish the relationship between the chapel with its associated yard and the buildings beyond. Also, a fifth 'keyhole' trench was placed over a notable depression in the western wall of the enclosure. This was soon shown not to be an entrance into the yard, but the effect of erratic shooting at the north-west corner of the chapel.

Excavations in 1976 were intended to complete the exercise by extending the examination of the area outside the chapel from the four trenches to the whole area enclosed by the outer wall; and to attempt to relate the sequences outside and inside the stone chapel. The lower levels of the deposits within the chapel area were to be completely excavated down to the underlying natural deposits. As consolidation and display was to be restricted to the chapel and enclosure, it was not considered justified by the Inspectorate to examine further the areas outside the enclosure wall.

When work resumed in 1977, it was very small-scale and intended only to be concerned with producing an up-to-date survey of the site. However, on arrival at the site, it was discovered that consolidation of the south wall of the chapel by the squad had necessitated dismantling the outer face. The opportunity was taken to examine the south-east corner of the chapel. Because the building was to be consolidated, it had not been possible in 1975 or 1976 to remove or cut through the walls. Although this small-scale work became possible in 1977, it nevertheless remains the case that it is difficult to demonstrate stratigraphic continuity within and outside the area of the chapel.

FORM OF THE REPORT

The report that follows has been written in the light of recent discussion about the nature of archaeological publication. The so-called 'Frere' report (AMB England 1975) and an article in an earlier volume of these *Proceedings* (Alcock 1978) have both suggested publication in letterpress of syntheses. Both proposed solutions involve the production of two reports, one for archive, one for print. More preferable would seem to be the solution adopted at Northampton, where the primary report is placed in microfiche fully integrated with the conventional letterpress report and available, therefore, in a readily-

accessible multi-copy form (Williams, F 1979, 38–9). Here there has been no change in the basic data available (compare with Williams, J H 1979), simply a change in the form of presentation; nor has there been the unnecessary duplication involved in the production of two reports. A similar form of presentation to that in the second Northampton report has been adopted here, with detailed descriptions of the various ‘episodes’ on the site, and the associated layer lists, contained on microfiche, and a description by major phases and general discussion included in the printed report. Similarly, with finds, both artefactual and biological, detailed catalogues are presented in microfiche with discussions of the various groups in the printed report. Cross-referencing is made between the two elements, which are regarded as *complementary parts of one report*. The material in microfiche is not regarded as ‘secondary’ or unnecessary: it is the basis upon which the more generalized statements in the printed report are made, and is therefore fundamental.

DOCUMENTATION

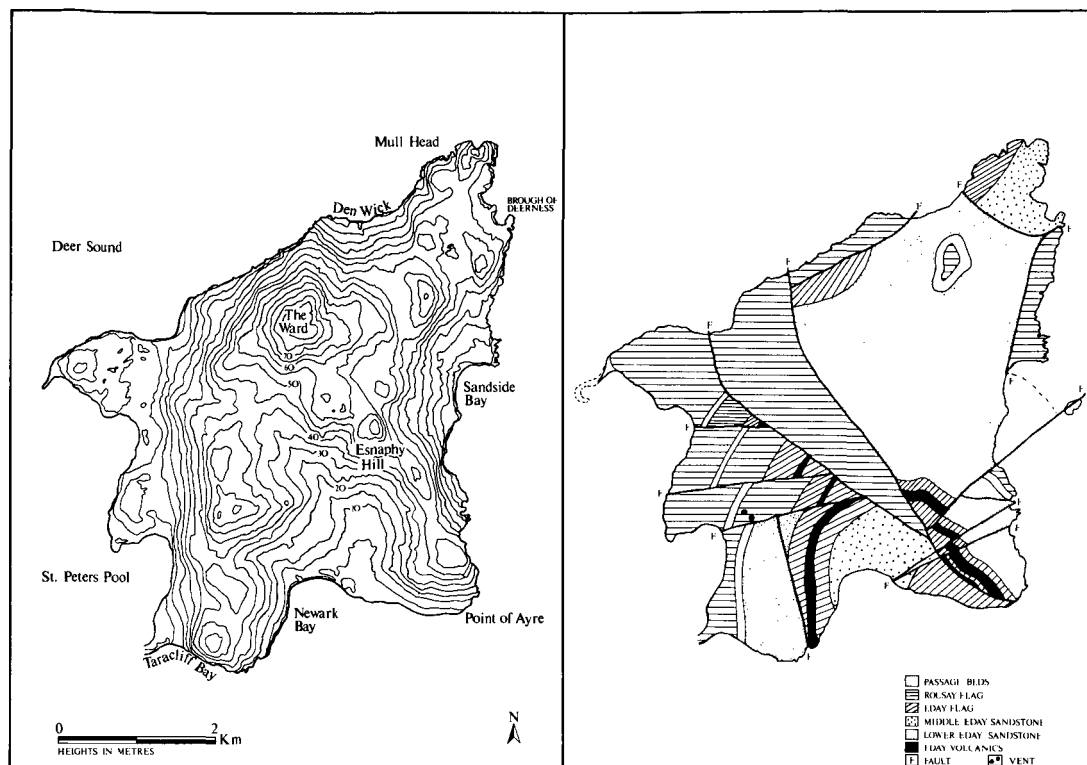
The basis of the recording system is described in microfiche (4: E9–10), and all primary records relating to the excavation and survey are deposited in the National Monuments Record for Scotland, 54 Melville Street Edinburgh. During post-excavation analysis a number of reports have been produced on different aspects of the work which are lodged in this archive. These ‘archive reports’ represent, as a secondary stage, the major working through of the material, and form the basis for the report in letterpress and microfiche. Copies of these reports are also lodged with the Ancient Monuments Branch of the Scottish Development Department, 20 Brandon Street, Edinburgh, and the Orkney Archaeologist, Orkney Heritage Society, 48 Junction Road, Kirkwall. In addition to the published version, copies of the typescript are lodged with the three agencies noted above. A further copy of the typescript has been lodged with the Tankerness House Museum, Kirkwall, to whom all finds from the excavation have been assigned, except for biological material, which is assigned (with a full listing) to the Royal Museum of Scotland, Chambers Street, Edinburgh.

THE SETTING: THE DEERNESS PENINSULA (illus 2)

The Deerness peninsula, joined to the rest of Mainland by a narrow stretch of land, has areas of sandy beaches (St Peter’s Pool, Newark Bay and Sandside Bay) as well as high cliffs in the north and north-east culminating in Mull Head. The Brough of Deerness, created in part by sea erosion, is typical of the latter, and is in the area of higher ground to the north and east of Esnaphy Hill (62 m above sea level) and The Ward (87 m), where peat-moss dominates the landscape. The topography of this area is influenced by both the solid geology, shown to consist of Lower and Middle Eday sandstones, and the drift, composed of boulder clay (Mykura *et al* 1976, *passim*; Heald 1977).

The natural setting is described in more detail elsewhere with, in particular, the results of pollen analysis carried out by Mrs A M Donaldson on a peat sample taken in 1976 from the environs of the Brough of Deerness (illus 3). Unfortunately, it was not possible to directly correlate any vegetational zone with the periods represented in the excavations on the Brough. Hence, the results have not been reproduced here, and readers are referred to that publication for its demonstration of the existence of local native woodland or scrub during some part of the post-Glacial period (Morris, forthcoming).

Although there is equally clear evidence for the removal of this woodland at some later period, nevertheless the native species of trees and shrubs represented by the charcoal found at the Brough of Deerness (fiche 4: E7–8) indicate the possible continued presence in the area of pockets of woodland or scrub. The name Deerness, probably derived from the Old Norse *Dýrnes* as used in the *Orkneyinga Saga*, meaning ‘animal ness’ (Clouston 1927, 7 fn; Marwick 1952a, 76), along with the tradition of deer antlers being recovered along the coast of Deer Sound and the peat moss at Mirkady (fiche 2: BII, no 66) could confirm the possible existence of some tree cover used by these animals, if probably not a deer forest as such (Barry 1805, 24). The existence of even small areas of woodland would have an effect on local settlement and economy, and c 1529 ‘Jo Ben’ stated the belief that ‘This parish was formerly woody, and many wild beasts were here’ (Macfarlane 1980, III, 307, 318). The



ILLUS 2 The Deerness Peninsula: topography and geology (after A Heald – *copyright*)

account in the *Statistical Account* refers to a number of trees and branches being found in the peat-moss (Clouston 1927, 9) and Low confirms this (1879, 56). The absence of a rough craggy landscape in the area was an obvious advantage to early settlement, making clearance of the heathland to provide farmland far easier.

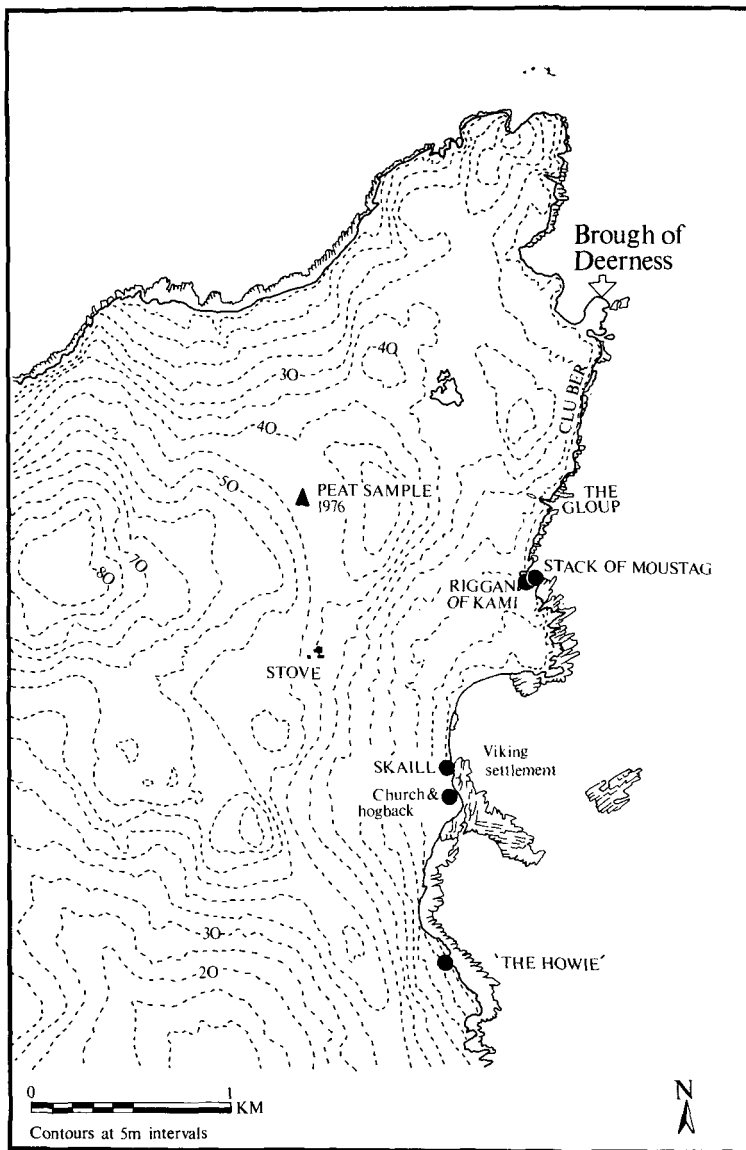
SETTLEMENT

with Kenneth A Steedman

It has been possible to place the results from the Brough more clearly against the archaeological background in the peninsula. Kenneth A Steedman, then an undergraduate at Durham, undertook fieldwork in 1979, combined with re-examination of existing records, presenting a BA dissertation in 1980 (Steedman 1980). An edited version is published here, with a gazeteer of the archaeological sites and monuments (fiche 2: A5–B12).

The peninsula has probably been settled in all historical periods since the Neolithic. There are clear Pictish period phases at Skaill (no 38) (Gelling, forthcoming), and the three sites of Skaill, The Brough of Deerness and Newark (no 49) all provide evidence of settlement in the Viking and Late Norse periods in one form or another. Deerness is mentioned in the *Orkneyinga Saga* and two places which were probably there are named: *Hlaupandanes*, possibly to be equated with Skaill, and *Skeggbjarnastaðir*, which was apparently situated in north-east Deerness. The latter is one of the *staðir* farm names, common in western Mainland but rare in the east (Marwick 1952a, 80).

The peninsula was a separate parish at one time, but has been joined with the parish of St Andrews, which occupies the area of Mainland on the other side of Deer Sound, since at least the 16th century (Scott



ILLUS 3 North-east Deerness, with location of peat sample

1871, V, 387; Clouston 1927, 3). It was skatted, or assessed, as a six-uriland area (Clouston 1927, 1-3; Marwick 1952a, 76), and Clouston has suggested (1927, xx & 3) that there would have been a chapel in each uriland, although only two, together with the church at Skail, were discovered. There has been a continuing process of smaller land units being lumped together to produce larger, more economic farms. The ruins of several old crofts remain standing at various points throughout the area (eg Millhill, no 37), but the majority appear to have been demolished, if a comparison between the 1882 Ordnance Survey 6" sheets and their modern counterparts is reliable. Virtually no trace is left now of the demolished buildings and this could be explained by the observations made during the destruction of the cottage at Quoys Farm (no 43). There the foundations were merely stone slabs laid horizontally, protruding some way to either

side of the wall. If the foundations were of this type at all the crofts, then near complete demolition would be relatively easy and subsequent ploughing would remove any traces. At this site a number of artefacts that could well be Norse, together with shell middens, were found in clearance.

As an area of Orkney, Deerness has had its fair share of excavations: excavations have recently been carried out at Newark Bay (Church, cemetery and earlier souterrain: no 49) by Dr Don Brothwell (then of the British Museum, Natural History, now Institute of Archaeology, London University), at Skaill, (Viking, Pictish and earlier settlement sites: no 38) by the late Mr Peter Gelling (Birmingham University, Department of Ancient History and Archaeology), and at Riggan of Kami (Iron Age defensive site: no 12) by Mr Gelling (illus 59).

THE BROUGH OF DEERNESS (NGR HY 5960 0873)

As is evident from the description above and the figure (illus 2) based on work by Heald (Heald 1977, 53–6, figs 3 & 8), the Brough of Deerness is composed of Eday Sandstones, and at the junction of two fault-lines. The Brough-Sandside fault brings up an area of Rousay Flagstones on a north-easterly trend along the eastern coast of the peninsula and the Brough-Denwick fault, bringing down Eday beds from Mull Head, bends round to join it. Aerial photographs of the Brough emphasize the way in which the junction of the faults has been accentuated by coastal erosion of the cliffs on the east coast of the Deerness peninsula (illus 4). The promontory of the Brough thus projects into the North Sea, and continual sea action has resulted in the formation of two bays on either side of the promontory – Large Burra Geo to the west, and Little Burra Geo to the south-east. A promontory formation was maintained by a land-bridge leading to the Brough and the retention of a rock and shingle beach between the mainland and the Brough prevented the site from becoming an island.



ILLUS 4 Brough of Deerness, from east-south-east (*copyright* Durham University Excavations Committee)



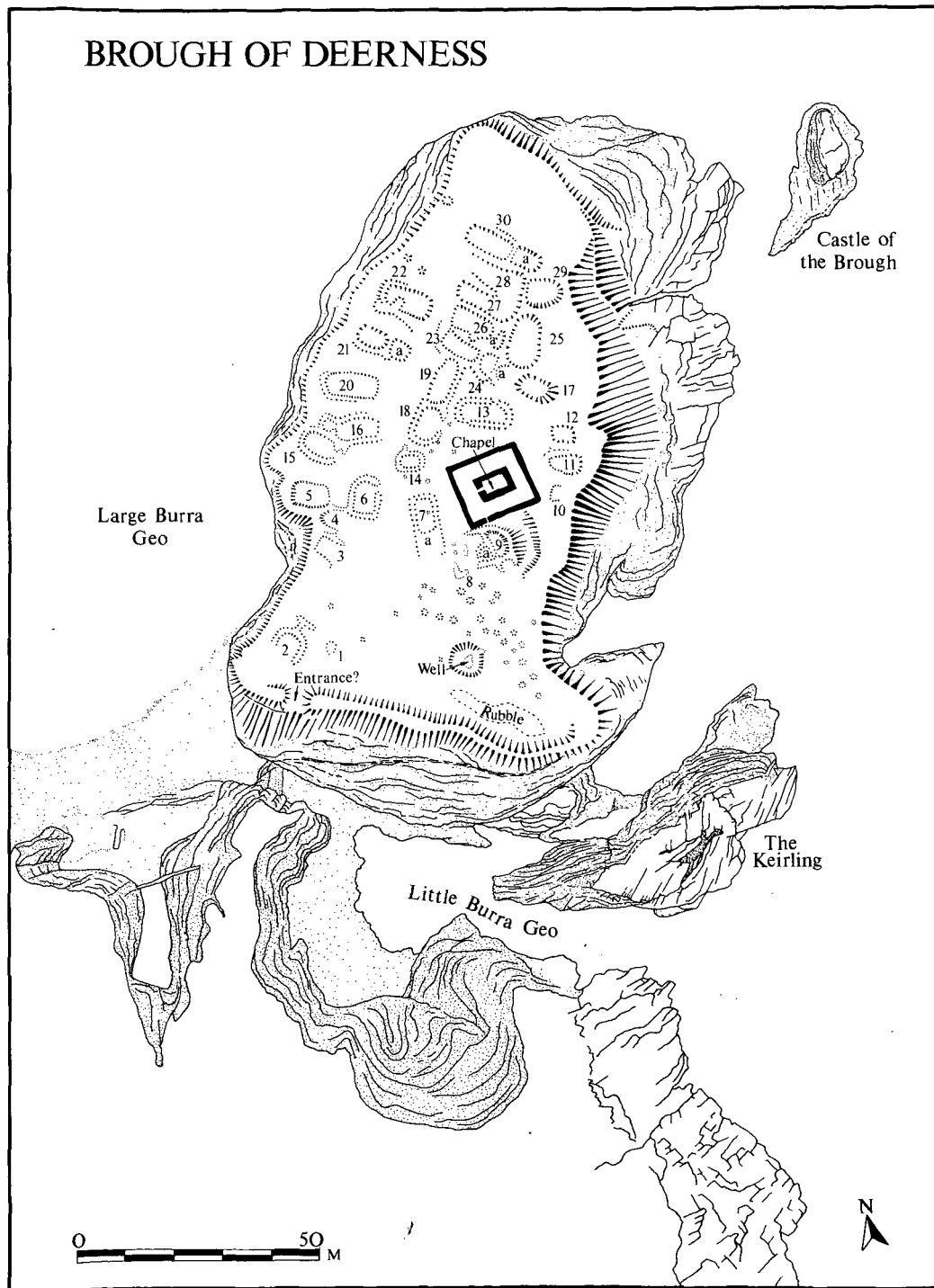
ILLUS 5 The Brough of Deerness and its environs: vertical photograph (J D H Radford for Sea Mammal Research Unit – copyright)

Large Burra Geo is an open bay, capable of allowing boats to beach, and there are still the remains of a noust above the shingle (no 9: fiche 2: A8). Little Burra Geo is sheltered by the 'Keirling', a rocky extension of the Brough to the south, producing a narrow entrance to the bay (illus 5). To the north-east of the Brough is a further stack, known as 'Castle of the Brough'. The Brough is 1 km south-south-east of Mull Head, the most northerly tip of the peninsula of Deerness.

Owing to the collapse of the neck of the peninsula, the Brough became a rock-tower, and access to the Brough is now only possible by climbing down the mainland cliff to the beach of Large Burra Geo, and following a narrow track up the south face of the Brough. The collapse of the neck of the peninsula, which had acted as a land-bridge to the main plateau of the Brough (illus 5), must have occurred before the late 16th century if we take seriously the account by 'Jo Ben' of 'the Bairnes of burghes' (Macfarlane 1908, III, 307 and 318: fiche 2: C6). It may well have occurred in the later Mediaeval period, for the 'Borch de Dernes' was included in a list of islands in Orkney by John de Fordun in the late 14th century (Goodall (ed) 1759, I, 47: fiche 2: C6).

SURVEY 1977

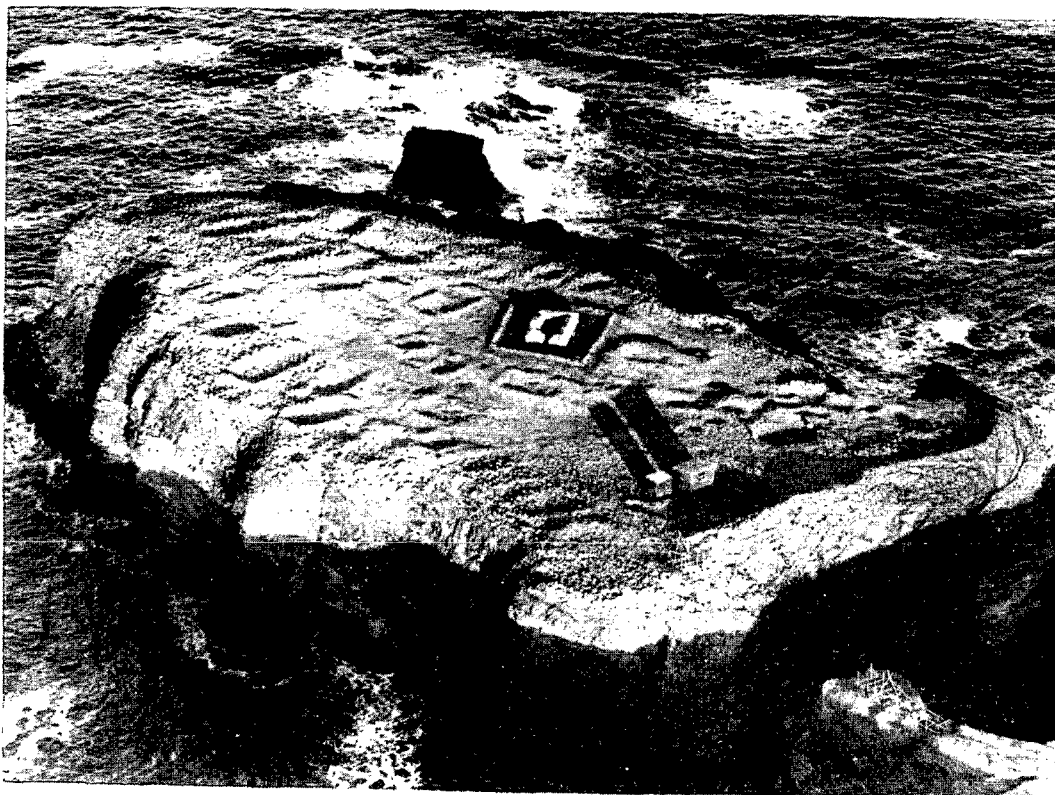
Undoubtedly, the Royal Commission plan (illus 51) was a very considerable achievement, given the natural vegetation. Even at the commencement of excavation in 1975, few of the buildings there recorded could be distinguished, and there was no reason to doubt the essential accuracy of the plan. However, clearance of the undergrowth in that year indicated that the 1930 survey was incomplete, and this was



ILLUS 6 The Brough of Deerness as surveyed by Durham University, and its environs

confirmed in observation from the air in 1976. Since it was obvious that the additional structures visible so affected the overall view of the site as represented by that plan, a new survey was an essential component of the renewed, if limited, programme of work here. The Inspectorate therefore agreed to the undertaking of a fresh site-survey, and this was carried out in July 1977, following further clearance of the undergrowth by sheep. The methods of surveying adopted are described in the microfiche (2: C3-5) by Mr Fred Bettess, then of Sunderland Polytechnic, who supervised the surveying.

The results of the survey were published (Morris 1977), and are reproduced in fiche (2: G10-14). A summary, therefore, only appears here to accompany the plan (illus 6). The new survey emphasizes the bank on the landward side, with some surviving walling and the entrance immediately opposite the stump of the land-bridge. The greatest change from the Royal Commission's plan of 1930 lies in the recognition of at least 30 rectangular buildings in place of their 19. Some of these apparently have more than one room. A series of buildings, clearly seen in aerial photographs taken after the survey (illus 5 & 7), exist along the western edge of the peninsula, orientated roughly north-west/south-east. This orientation is also seen in the northern part of the site, but contrasts with buildings nos 14, 18, 19 and 25, which are roughly north-south. As these different orientations are either side of a space reminiscent of a 'hollow-way', the impression of a palimpsest of different periods is reinforced. A group of buildings immediately around the chapel and enclosure (nos 10-14) have a distinctive east-west orientation that is echoed in buildings 16 and 20 in the western part of the site. Only those buildings to south and west (nos 7/7A, 8 & 9/9A) appear to echo the orientation of the enclosure and chapel, and there was no clear evidence to support Dr Radford's suggestion that the 'rectangular garth' had overlain one of the structures (fiche 2: F3&F5). In all, there is an apparent regularity to the plan of these buildings not evident in 1930. To the south, the group of 21 depressions identified as circular huts by the Royal Commission were added to by a further seven to the



ILLUS 7 Brough of Deerness, from west (copyright - G Moberg)

north of the well. None, when examined, appeared to have clear evidence of stone construction – in contrast to the well. Lamb suggests (fiche 2: F13–14) these may be the result of shelling. A large mound of rubble close to the bank presumably results from clearance at the site.

EXCAVATIONS 1975–7: THE SITE

INTRODUCTION

As discussed above, the description of the stratigraphic and structural evidence from the site is considered in the microfiche section of the report. The description there is based, as far as is possible, upon *objective observation on site during excavation*, and the factual data are placed into ‘episodes’ which may be ordered into sequences in three major areas of the site (the Chapel area: illus 82; Inside the Enclosure: illus 93; Outside the Enclosure: illus 94). These have been established quite independently, but although direct correlation cannot be undertaken of the three sequences, an overall-sequence for the site as a whole can be offered, based upon more indirect evidence (see fiche 3: G10–12). The sequences, once correlated, have been grouped into ‘phases’, which represent the interpretation of the writer (see table 4, fiche 3: G12). It is not considered necessary here to offer detailed justification of the correlation, as the material is available in the complementary fiche section of the report. In the section that follows, the description is by the ‘phases’ within the overall sequence as put forward there. Equally, the figure-drawings accompanying the text are based upon this, but the more detailed ‘episode’ plans within the areas of the site may be consulted in the microfiche (illus 69–81, 83–92), together with the two major sections through the excavations (illus 95).

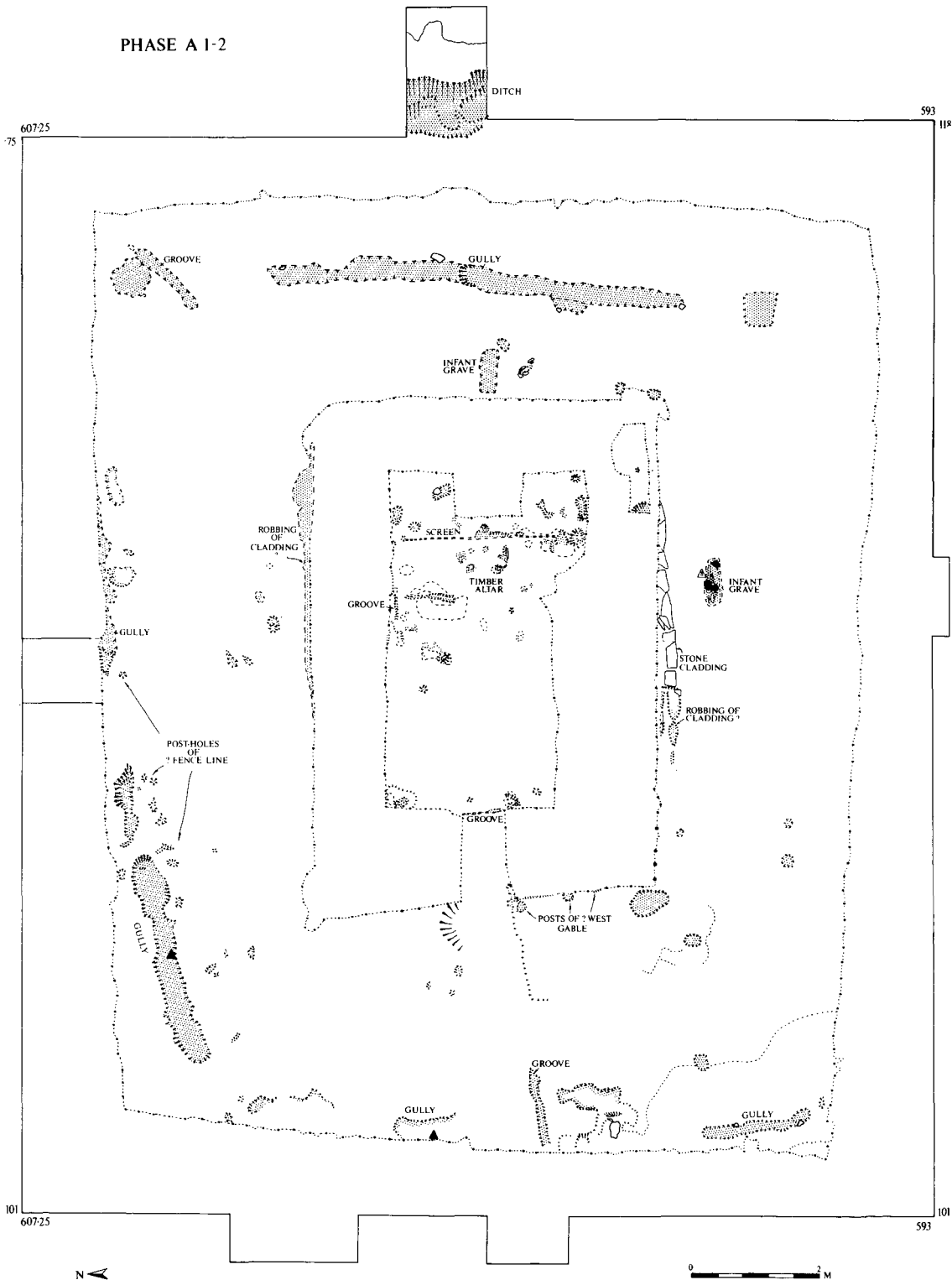
SUMMARY OF OVERALL SEQUENCE

The stratigraphic sequences and structural features examined on this site can broadly be divided into five phases, most of which are capable of further subdivision. The following is a summary in tabular form of the overall sequence. Details of the phases are described in the sections following table 1.

TABLE 1

Summary of Overall Sequence

| | | | |
|---|------------------|----|---|
| A | TIMBER PHASE | A1 | Construction |
| | | A2 | Use of timber chapel and enclosing gullies; associated postholes and 2 infant graves in enclosure; small ditch to east. |
| B | INTERMEDIATE | B1 | Irregular features, including gully, in chapel area. |
| | | B2 | General deposition of material, some burnt, in all areas. |
| C | STONE PHASE | C1 | Construction of stone chapel and enclosure wall. |
| | | C2 | Use (1). Pebble floor in chapel; gravel path, clay deposits, four graves in enclosure area; infilling of ditch to east. |
| | | C3 | Use (2). Flagstone floor in chapel; mixed deposits around chapel. |
| | | C4 | Use (3). Stone bench against south wall of chapel. General deposits elsewhere. |
| | | C5 | Use (4). Mortar over floor and steps, and on walls of chapel. Gravel spread and levelling-up outside. |
| D | DECAY & COLLAPSE | D1 | Chapel and enclosure out of use – altar disturbed, general decay and accumulation. |
| | | D2 | Collapse of chapel walls and clay deposition outside. |
| | | D3 | Extensive stone collapse both in chapel area and enclosure. |
| | | D4 | Further stone collapse in chapel. |
| E | FINAL COVER | | Chapel used for target practice: development of sub-turf and turf around outside. |



ILLUS 8 Chapel and Enclosure: Phase A




PHASE A (illus 8)

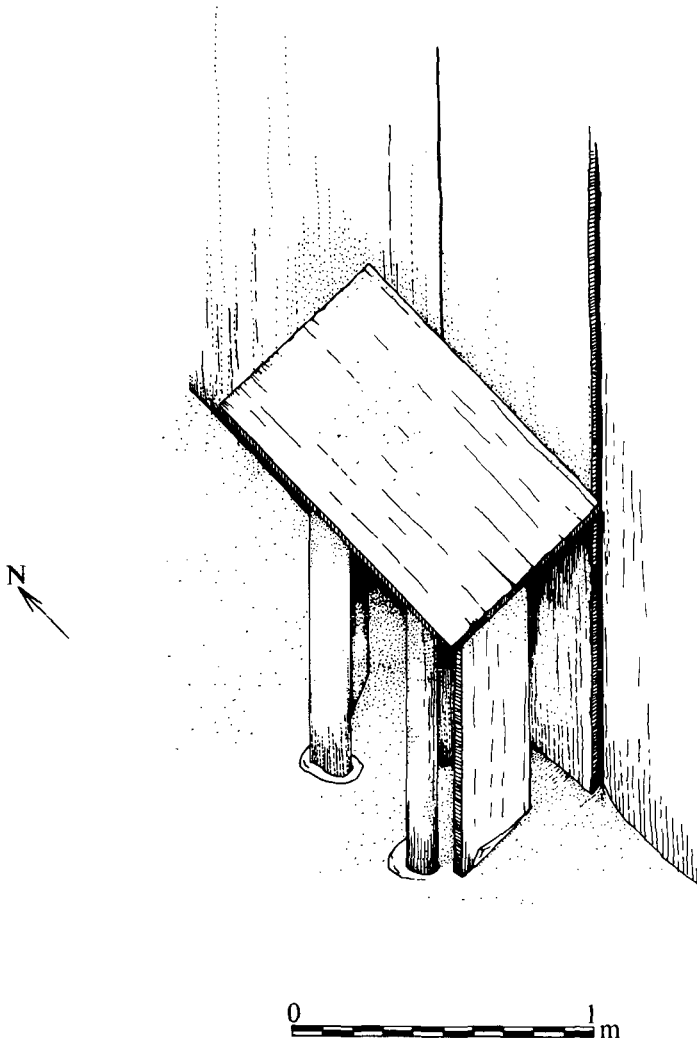
The earliest significant period of activity on the excavated part of this site is what may be termed a 'Timber Phase'. Complete understanding of the features uncovered is hampered by the fact that the considerable area below the standing wall of the stone chapel and the later stone bench could not be excavated. However, enough was recovered elsewhere to postulate the erection of a wooden chapel within an enclosure marked by gullies and a possible fence-line.

The basis of the archaeological identification of various cut features in the natural clay subsoil as the remains of a timber chapel rests largely on a group of postholes and grooves in front of the later stone altar (see below). The three postholes and three grooves are interpreted as a timber altar (see fiche 3: A5-6), approximately 40 cm east-west and up to 75 cm north-south. As can be seen from the photographs before and after excavation (illus 55), individual features such as clay packing were quite clear, and overall they formed a quite distinct and discrete group of features. Apart from this group's size, location and alignment, another consideration has been taken into account in its identification. Immediately to the east, at a distance of 30 cm was a slot aligned north-south, with what appeared to be clear indications of a further slot

TABLE 2
Symbol Key

Objects precisely located are marked by solid symbols, for those which are not, the symbol is empty.

| | |
|---|---|
| ◆ ◇ | COPPER OBJECTS |
| ■ □ | COINS |
| ● ○ | IRON |
| ■ □ | OTHER METAL OBJECTS |
| ▲ △ | INDUSTRIAL RESIDUE |
| ● ◐ | POTTERY |
| ▼ ▽ | STEATITE |
| ▲ △ | OTHER STONE OBJECTS |
| ★ ☆ | BONE OBJECTS |
| ▼ ▽ | CLAY PIPE |
|  | CUT FEATURE (e.g. post-hole, slot etc.) |
|  | BURNT AREA |
|  | FEATURE CONTAINING SOME BURNT MATERIAL |



ILLUS 9 Isometric reconstruction of timber altar, against east wall

to north and south: these were taken to represent an eastern timber wall or screen against which the postulated timber altar was placed, and the isometric reconstruction of this can be compared with the original features as excavated (illus 9). There are some further postholes at north and south, as well as immediately to the east which *may* be related in constructional terms, although the evidence *might* be interpreted as indicating this to be secondary.

The fugitive remnants of a groove, interpreted as a timber wall roughly at right-angles to the eastern wall or screen, were found but only for a short distance, and the postulated junction would have been under the standing stone chapel's north wall (illus 10). Any timber south wall would have been in the area not available for excavation. There are two candidates, from the evidence, for remains of a western wall. A line of postholes, with some slight indication of a connecting groove, was found partially below the western wall of the stone chapel (illus 56), and these *may* be taken as posts from a western gable. Alternatively, there was clear evidence for two postholes, not quite in alignment with the postulated north wall, and a groove immediately inside the later stone chapel's west wall. Although the groove *might* more logically seem to be

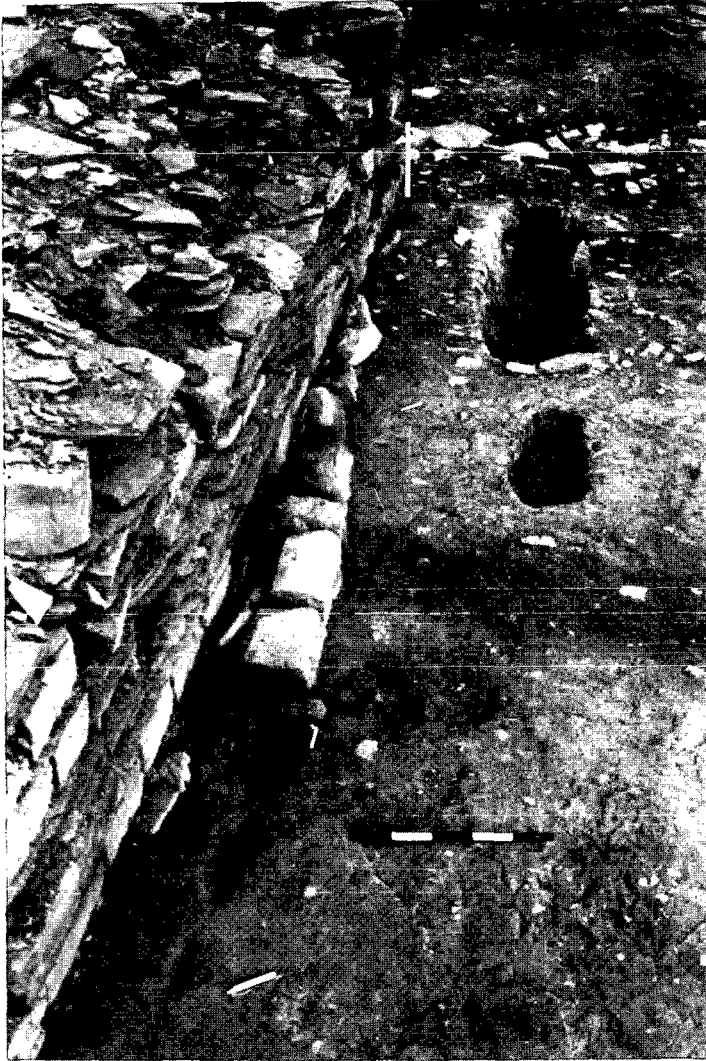
associated with the stone chapel, as representing pressure from a door, the stratigraphic data do not seem to support this (fiche 3: A7). Certainly the posthole immediately to its south must pre-date the stone chapel.

In putting forward the evidence for this interpretation, it is nevertheless recognized that the elements involved are fragmentary – in part, no doubt, due to later disturbances and the consequent inevitable fate of primary negative cut features, and in part due to incomplete excavation of the area. It is also recognized that a number of stake- and postholes and slots (most notably a groove at right angles to the postulated north wall) are not specifically alluded to. It can only be hazarded that they represent, in very muted form, certain internal arrangements within the chapel. Equally, to the east of the eastern wall or screen are a rash of features which cannot be grouped into any immediately obvious configuration – and this would also be true of a number of postholes to the east of the eastern stone wall, and under the south-east corner of the stone chapel. It is unsatisfactory to conclude thus, but no useful purpose is served at this stage by attempting to interpret them.



ILLUS 10 General view of north and east timber wall, and timber altar, from west

The very fact of the existence of these eastern postholes and other cut features poses a further problem of interpretation, for some of them lie under an area that would be covered by a postulated stone 'cladding' for the timber chapel. An early wall, merely surviving at foundation level, was discovered running on a slightly different alignment to the south wall of the later stone chapel (illus 11). A number of impressions in the clay surface also are taken to indicate robbing of a continuation westwards. On the north side of the later chapel, no stones were found, but it is considered that enough evidence was forthcoming to postulate the robbing of a similar line of stones on a similar alignment, and a possible return southwards. It is with this group of features that the absence of excavation below the later stone chapel walls is most critical, and the existence of a stone cladding to the proposed timber chapel can only be put forward as a hypothesis, with a certain amount of archaeological evidence in support.



ILLUS 11 Early wall foundation, below stone Chapel south wall, from west
(D Jeffrey)

An alternative hypothesis would be that these elements represent a separate building intermediate between the postulated timber chapel and the existing stone chapel, but largely demolished. There would be no stratigraphic objection to this for either the southern wall or the northern 'robbing', and even the absence of evidence for another altar is not conclusive, for it would presumably have been under the present east wall and/or stone altar. The evidence (albeit negative) that inclines the writers to propose the association, rather than separation, of the two groups of features, is the absence of any clearly associated intermediate stratum/occupation layer but it is accepted that there is an alternative constructional sequence that can be postulated.

As pointed out in the detailed description in the microfiche section (3: A8), the fills of the cut features do not, of course, relate to their use, but to a later period when the original timber features had gone out of use. To that extent, within the Chapel area, it is possible to distinguish a construction phase (A1) from a use phase (A2), while remembering that the use does *not* relate to the timber buildings.

However, in the other excavated areas – the Enclosure area and Outside the enclosure – such a distinction cannot be easily maintained, and for descriptive purposes here are treated as one.

The most prominent group of features outside the postulated timber chapel with its stone cladding was a set of gullies. The clearest evidence comes from the northern part of the area with a gully some 40 cm wide cut into the natural clay for a continuous length of some 3 m, together with an extension of just over 1 m. After a gap of c 1.25 m. The curving line is continued by another gully whose inner (southern) edge could be traced for some 2.5 m: most of it underlies the later stone enclosure wall, which partially sank into it (illus 12). It may be that this gap represents an entrance, but as the overall evidence is so partial, it is only one of several possible locations. Along the inside (south) of this gully were found a number of postholes, possibly representing a fence-line. Other stretches of gullies were found both to east and west of the postulated chapel, as marked on the plan (illus 8), together with two grooves, whose purposes cannot be hazarded. The eastern gully was 6.90 m long and 32 cm wide. A number of small stake- and postholes were excavated within the area enclosed by these northern, western and eastern gullies, but as with those to the



ILLUS 12 Enclosure area: north gully from west-south-west

east of the eastern wall/screen of the chapel, no overall coherence was apparent. A few finds were made from the fills of the gullies and other features (including a stone pot-lid, RF 108), but none closely datable.

The only clear evidence for use (ie Phase A2), of the area enclosed came from two graves, both of infants (as is clear from their dimensions), simply dug into the subsurface, and covered with a plug of clay. That to the east was 70 cm by 30 cm and cut 30 cm into the subsoil; the southern grave was 73 cm by 28 cm and cut 16 cm into the subsoil. Traces of a wooden coffin with iron fittings were present in the latter (RFs 126-9, 147, 155-161), and some decayed bone fragments in both. These are discussed below, but it is clear that the individual in the southern grave was approximately five months old: the bones of the other grave could not even necessarily be considered human. Even though no southern perimeter was located to the enclosure which is suggested as associated with the timber chapel, the absence of other graves – particularly adults – was both unusual and unexpected. As discussed in the microfiche section (3: E7-8), two further infant graves are almost certainly not primary.

Outside the enclosure a ditch was found to the east. As excavated, it was only c 10 cm deep, but between 1.25 and 1.5 m wide. At the time of excavation it was presumed that it was the counterpart of the northern gully, but the dimensions are altogether dissimilar, and so it is assumed to form part of an unrelated feature to the east of the enclosure. Although it is difficult to be certain, despite its proximity to the later churchyard wall, it seems fairly clear that the ditch pre-dates the wall.

PHASE B (illus 13)

An Intermediate Phase in the history of this site is represented by a miscellaneous group of features within the chapel area, and to the south and east. The key to the sequence was provided by a gully running diagonally across the Chapel area. Its function is unknown, but it had clearly disturbed the upper section of a posthole of the earlier Phase A. In the fill of the gully an Anglo-Saxon coin of the reign of Eadgar (959-75) was found (RF 87: see below). A number of other amorphous features and spreads of material, burnt and otherwise, were noted. These were then overlain by a general deposition of a hard-packed charcoal-flecked sandy layer with gravel, and two further areas of burning. This material could either represent a period of more domestic usage of the Chapel area, or a general levelling-up layer for the construction of the stone chapel of Phase C, with associated burnt areas connected with the construction. Among Recorded Finds from the general layer were chert (148, 149), iron (96, 137) and two sherds of steatite (95a, b).

Certainly further areas of burning were noted across the southern part of the site, together with dumps of stones. Also, to the east, below the later stone enclosure wall, was a large patch of burnt material that appears to post-date the eastern ditch of Phase A, but not its infill (Phase C).

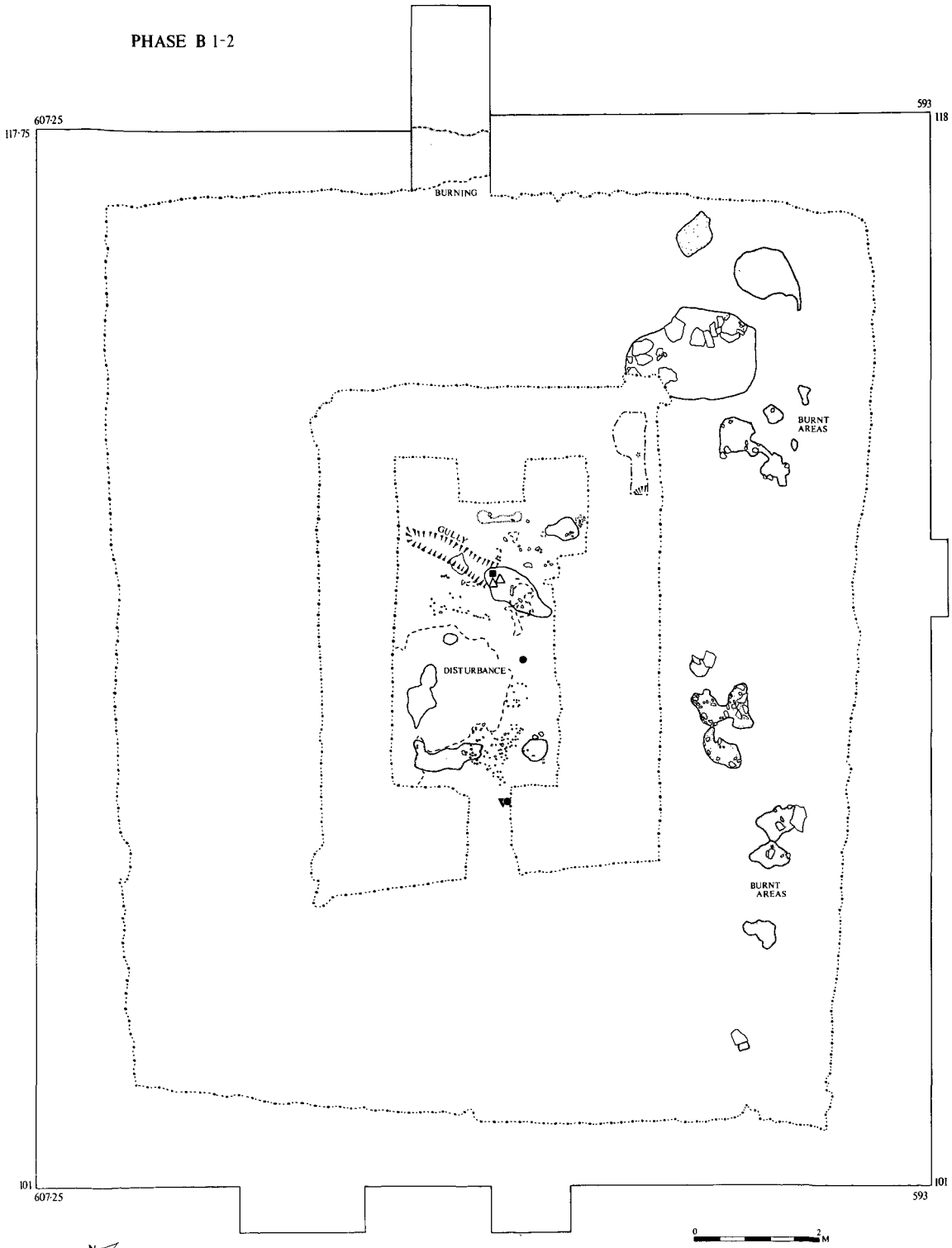
PHASE C (illus 14, 15, 18)

During this phase a complete re-ordering of the site took place, with the erection of a stone chapel, and associated stone enclosure wall in Phase C1, and then four stages of use of this in Phases C2-5.

Phase C1

In Phase C1, it is clear that the former perimeter to the site provided by the gullies and possible fence along its interior has been replaced by a low stone wall, of rough rubble construction, with a core of clay and rubble. It varies in width from 75 cm to 1 m and appears to have been laid directly on to the existing surface. It is not quite rectangular in shape, in that the enclosed area is 13.90 m east-west on the north side and 14.36 m at the south, while being 12.21 m north-south at the east side and 10.94 m at the west. There are rounded corners, and the east side in particular has a slight curve. A narrow entrance through the wall was provided towards the south-west, but even granted it splays from 26 cm to 45 cm, this must indicate that the wall was never very high as it would otherwise have been impossible to get through. There was no alternative entrance located, although the whole of the top surface of the wall was cleaned and examined carefully for this and for any traces of a surmounting wooden palisade or fence. Although a considerable amount of rubble tumble from the enclosure wall was noted in Phase D3-4, it could hardly have achieved more than a doubling of its meagre height (at the entrance, no more than 15 cm), and it can only be assumed that it was a symbolic demarcation, with perhaps some of the stone robbed from it later for use elsewhere on or off the site.

As indicated above, it is possible that what has been interpreted as stone cladding for a timber building, may in fact represent a separate stone-building phase. If so, it would probably relate to this phase.



ILLUS 13 Chapel and Enclosure: Phase B

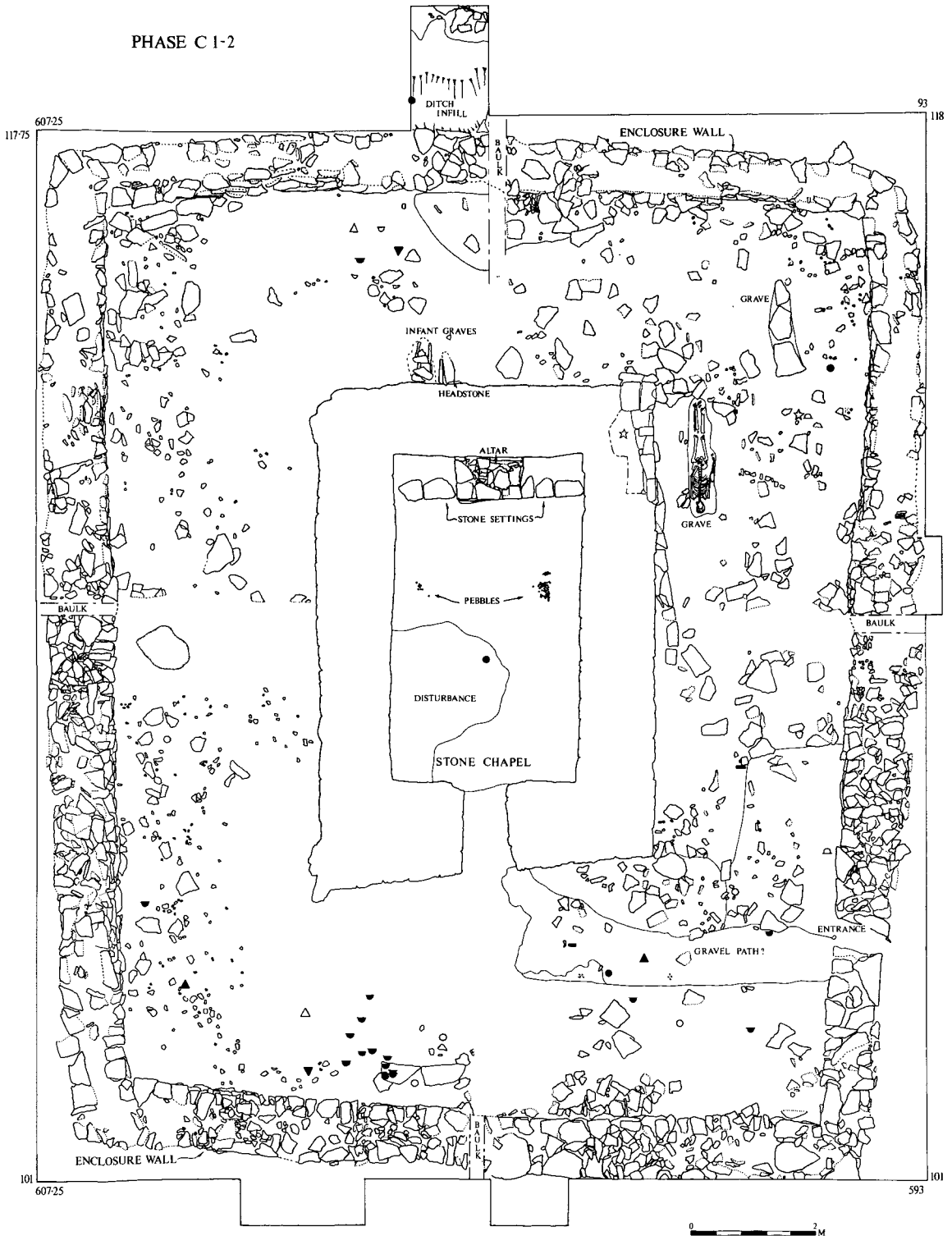
As can be seen from the plan (illus 15), its orientation would be at variance with the overall orientation of the enclosure, and this is further, circumstantial, evidence that the wall is likely to be earlier. It is here taken that the stone enclosure wall relates to the standing stone building placed not quite centrally within the area enclosed (illus 14). The building is unicameral, with walls varying in thickness from c 1.5 m at the west to 1.6 m at the east. The maximum internal dimensions are 5.23 m east–west by 3.03 m north–south and the entrance is in the west wall. Examination of the south-eastern corner in 1977 demonstrated that there was probably a bedding layer of brown clay on to which the walls were built. The walls appear to have been built of outer-coursed facing stones with a core of split stones and earth, and a quasi-decorative effect was achieved by the use of ‘courses’ of rectangular stone blocks contrasting with thin slabs (illus 16). No evidence for the use of mortar was forthcoming in the south-eastern corner, nor was the initial impression of re-building at the west end, based on the irregularity of the wall here resulting in an overall trapezoidal shape, borne out by close examination of the stone work. A bone point (RF 142) was found in the wall fill.



ILLUS 14 Chapel and Enclosure, from west (D Jeffrey)

Identification of the building as a Chapel is assured by the presence of a stone altar, centrally placed against the east wall, c 1.10 m by 0.67 m. Its construction utilized both flat slabs and stone blocks, but it had been disturbed at a later stage. When this disturbance was cleared out, it appeared that it may have overlain an earlier feature, for a large stone appeared to be deliberately wedged at the base, at an angle to the rest of the altar. However, when examined, no feature underlay the stone, and no indication was given of anything other than the small, and apparently random earlier cut features found to north and south (illus 8). To either side of the stone altar were raised stone settings one course high, each 98 cm wide and fitting the space to the walls of the chapel.

In 1867, Sir Henry Dryden noted the presence of an aumbry in the north wall, and a window in the east wall, which evidently had been splayed (see fiche 2: C9–14). Also he noted the western entrance standing considerably higher than in 1975, and possibly with a square head to the doorway. Dryden undertook a small amount of excavation in this entrance, which splayed from 0.83 m externally to 0.65 m internally.



ILLUS 15 Chapel and Enclosure: Phases C1-2



ILLUS 16 North wall of Chapel, from south-west (D Jeffrey)

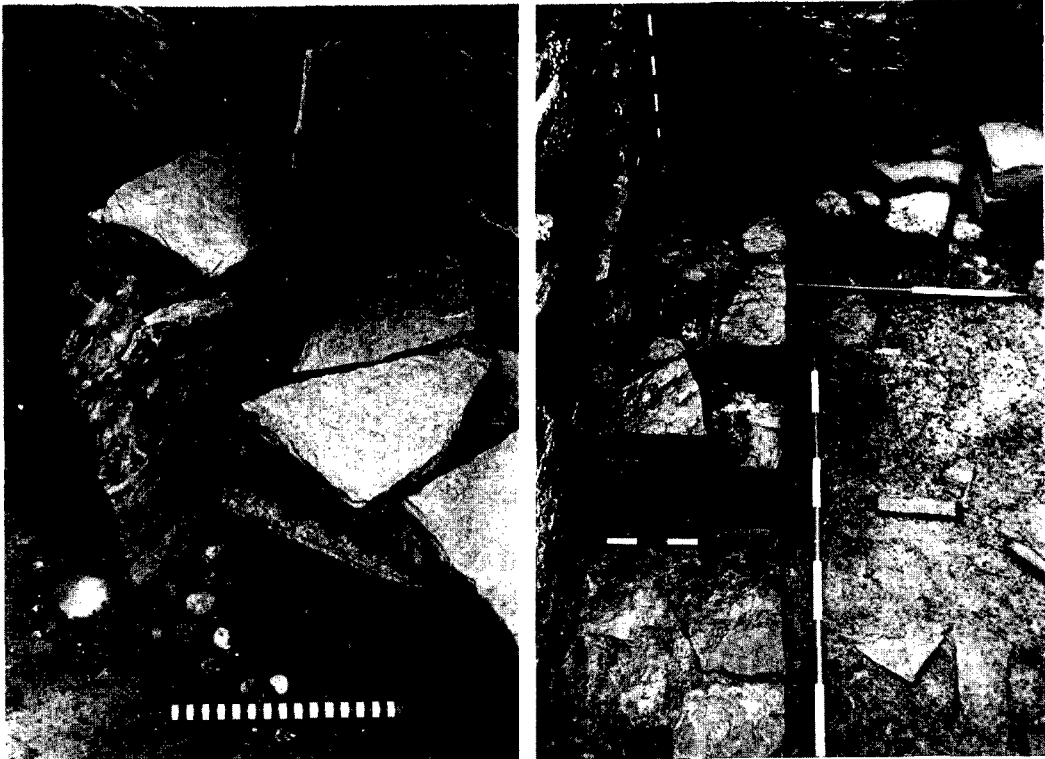
Phase C2

Phase C2, which can hardly be separated by a great time-interval from C1, consists of the first period of use of the re-ordered site. Within the chapel, a bedding deposit of sandy earth and gravel was found, with a few finds including iron (RF 75), but none diagnostic. On to this had apparently been set a pebble floor (illus 17a), but very little survived subsequent alterations within the chapel. A large upright stone against the south wall may be taken as a division between a sanctuary area and 'nave', but it is not conclusive stratigraphically that this may not relate to a subsequent episode of use (Phase C4).

Outside the chapel, a gravel spread appears to represent a path from the southern entrance through the enclosure to the western entrance of the chapel. This gravel path was associated with general clay deposits throughout the Enclosure area. These clay deposits contained a range of material, including sherds of pottery (RFs 92, 94, 97-8, 101-7, 109-11, 115, 117 & 121) and steatite (RFs 85 & 93), as well as objects of silver (RF 89), copper alloy (RF 119) and iron (RFs 83, 99, 113-14, 118, 120, 122, 135 & 140), bone (RF 78), flint (RFs 85 & 93), stone (RF 116) and industrial residue (RFs 77 & 139). These are all discussed below in the appropriate section of the Finds' discussion.

The most significant use of the Enclosure area is for burials. Four graves are considered to be from Phase C2. Two further infant graves show a different construction from those of Phase A2. They are of a stone-cist construction, and one had a headstone. No human remains were found in one, but in the other, the bones examined by Dr Hillson (see below) indicated that the infant died at birth or just afterwards. Both of these graves are best seen as relating to this phase, although the evidence is mainly indirect. Although there is *some* stratigraphical indication that they are later than the clay-plugged infant grave discussed above, their method of construction, which is similar to two other graves, much more clearly from this phase, would incline one to associate them. Also, there is the fact that they are placed directly next to the east wall of the chapel, in such a way that it would seem improbable that they could have predated the construction of that wall, for otherwise they would have been disturbed.

The other graves referred to, are both in the south-eastern area of the Enclosure area, and are clearly



(a) (b)
ILLUS 17 a, Pebbles, ?floor, below south bench, upright stone and ?seat, from north-west. b, Stone altar and settings, from north

either from Phase C2 or C3. In the south-eastern corner three large stone slabs covered a grave cut into the earlier layers and natural subsoil. As the grave was filled with rubble and clay, little remained of the skeleton, but enough of the skull survived for analysis to indicate an age between 6½ and 9 years (below). More remained of the individual in the grave to the south of the south-eastern corner of the chapel, and the analysis of the bones indicates a male, aged between 24 and 29 years at the time of death. This individual was placed without a coffin in a dug-grave, covered by a single cover-slab (illus 57). No artefacts were found in any of these graves, and clearly their orientation indicates, as with those of Phase A2, a Christian context for burial.

At this time, or later, the ditch in the area of the enclosure wall, was filled in with a clay deposit, and clay and turfy deposits were found in the small area beyond this and the enclosure wall in the other 'keyhole' trenches. Only one iron object (RF 47) was recovered.

Phases C3 and C4

Phase C3 is only clearly represented in the Chapel area, where it seems a new flagstone floor was laid in place of the pebble floor. Three large stone flags were noted, and they clearly underlie the major feature in Phase C4: a stone bench erected against the south wall (illus 18). This bench, two or three courses high was demarcated to the east by the upright stone noted under C2 above. It was 3.40 m long by 50 cm wide. Immediately to the east of the upright slab was a single stone block, that might be interpreted as a seat, possibly for the priest, if the upright slab is taken as dividing the internal area of the chapel. It may be that a group of stones against the north wall represent the remnants of a north bench: the area of disturbance in the chapel goes up to this point. A layer of brown clay with mortar and charcoal seems to be associated with this sub-phase possibly as the bedding for the flags, and from it came sherds of pottery (RF 79) and steatite (RF 73), as well as other less diagnostic objects (iron RF 74 and pumice RF 143).



ILLUS 18 Rubble, including *mensa*, inside Chapel, from west

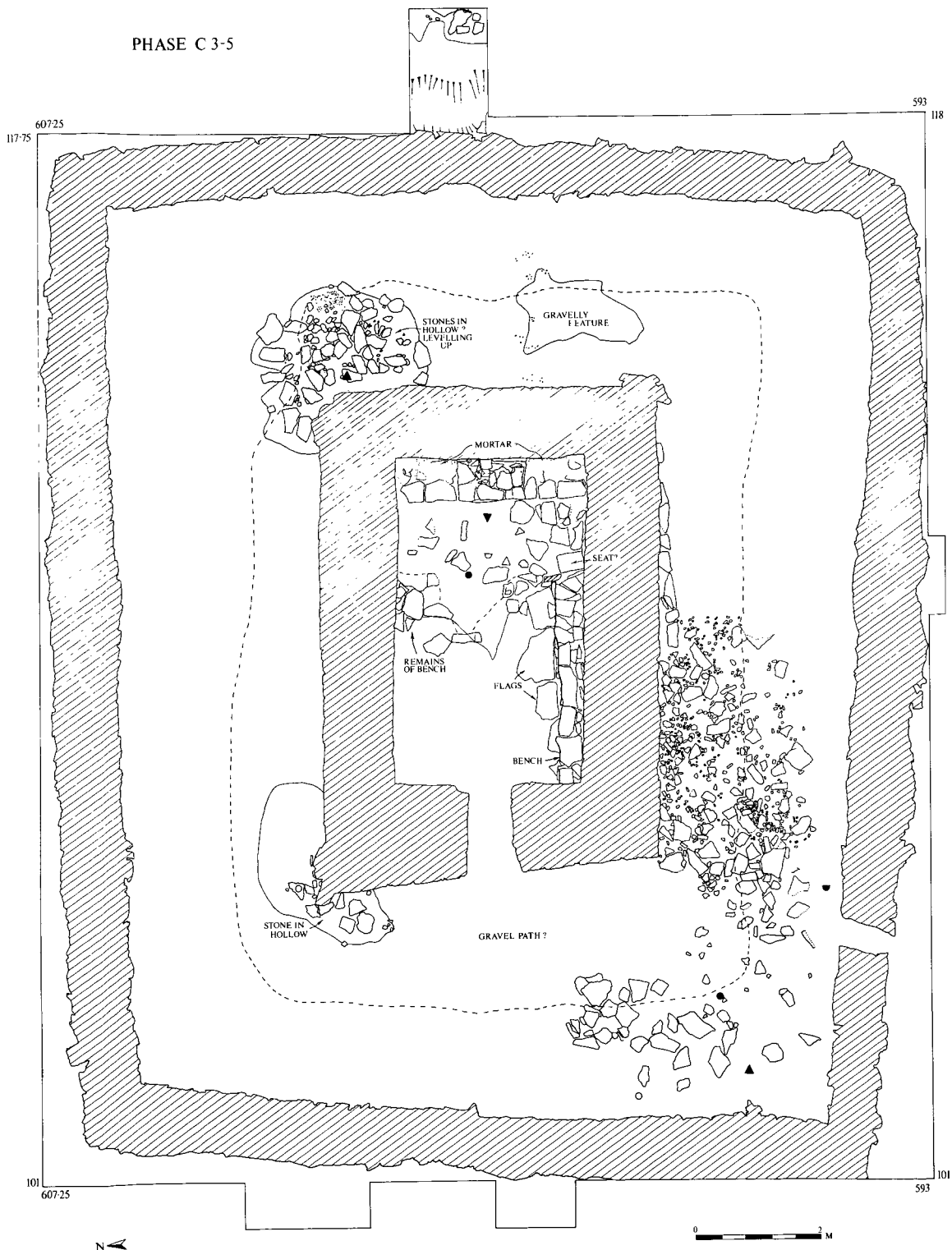
Outside the chapel a miscellaneous group of mixed stone and clay deposits seem to be contemporary with Phases C3 and C4. Stones were found in hollows at the north-east and north-west corners of the chapel, and are interpreted as levelling-up material (illus 19). Seven iron lumps (RF 162) were found here. A sherd of pottery (RF 81) came from a layer to the south of the chapel, together with quartz (RF 82) and iron (RFs 80 & 164). Pottery (RF 91) was also found in the succeeding Phase C5, along with pumice (RF 71). The pottery occurred in a higher layer of stones at the north-east corner, but the major layer associated with this phase was a general gravel layer around the chapel. This appeared to be a surface, or even path around the chapel, and pebbles found in association with it may be of some significance in view of Jo Ben's description of activities at the site (see fiche 2: C6). Within the chapel, this phase was marked by the laying down of a mortar floor in the eastern half, and extending over the steps to either side of the altar. In addition, a rough mortar skim had been smeared on the sides of the altar and the chapel walls to a point roughly in line with the upright slab. Mortar was also found in the altar.

PHASE D (illus 20 & 21)

There can be little doubt that the chapel went out of use after the stage represented by C5. Four stages of Decay and Collapse can be distinguished within the chapel area, and three within the enclosure area.

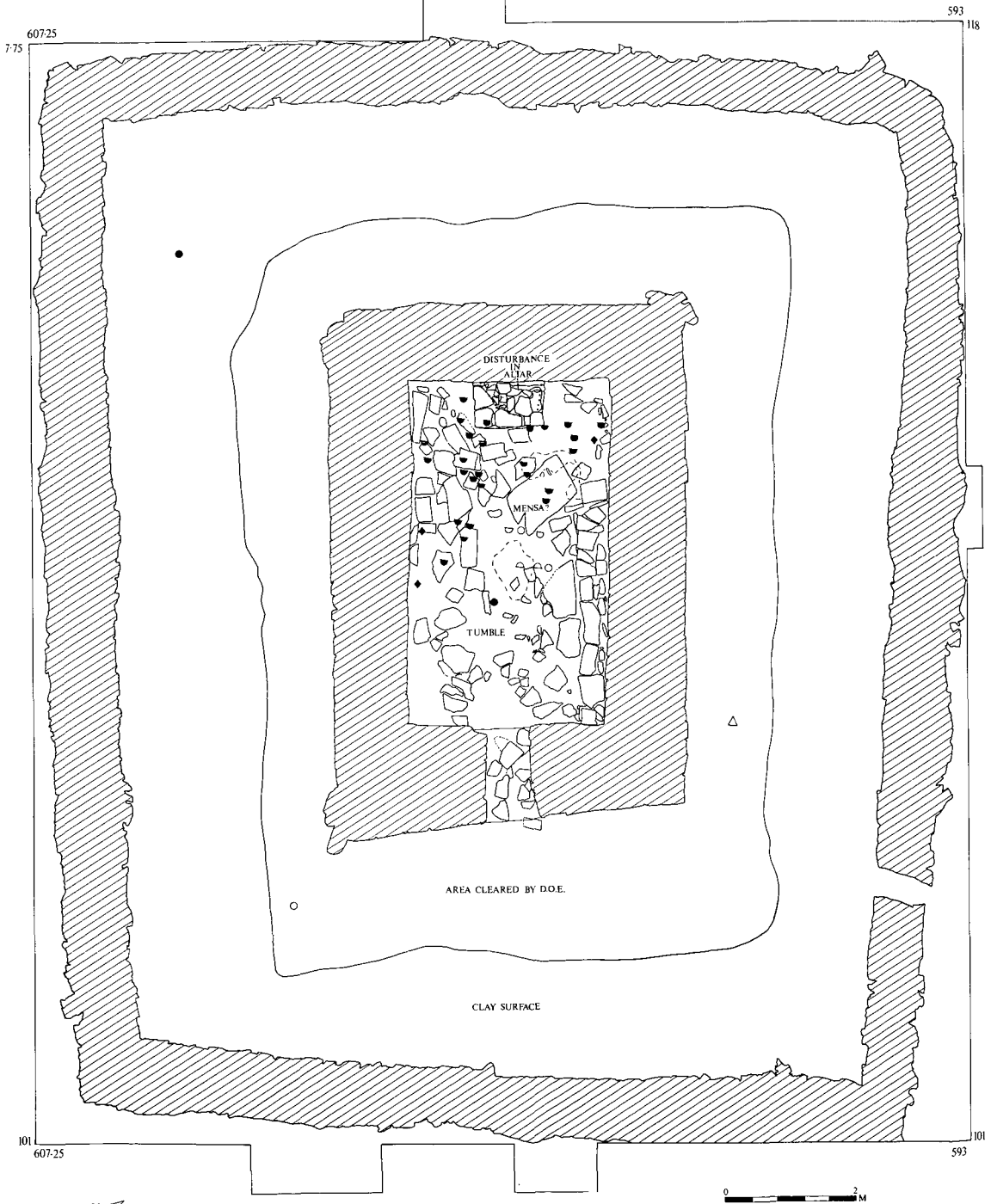
Phase D1

Phase D1 is marked by disturbance in the altar and two areas of burning above a uniform deposit of grey clay mixed with gravel and some stones. From one area of burning, 16 fragments of coarse fabric pottery (RF 54, 61) were recovered, and a further 40 fragments, including both the coarse-gritted ware and some finer fabric, came from the general layer (RFs 40-1, 43-53, 55-60, 62-8 & 144). Copper alloy objects (RF 42 & 69) and an iron nail (141) were also found, along with other debris indicating a state of decay within the chapel.

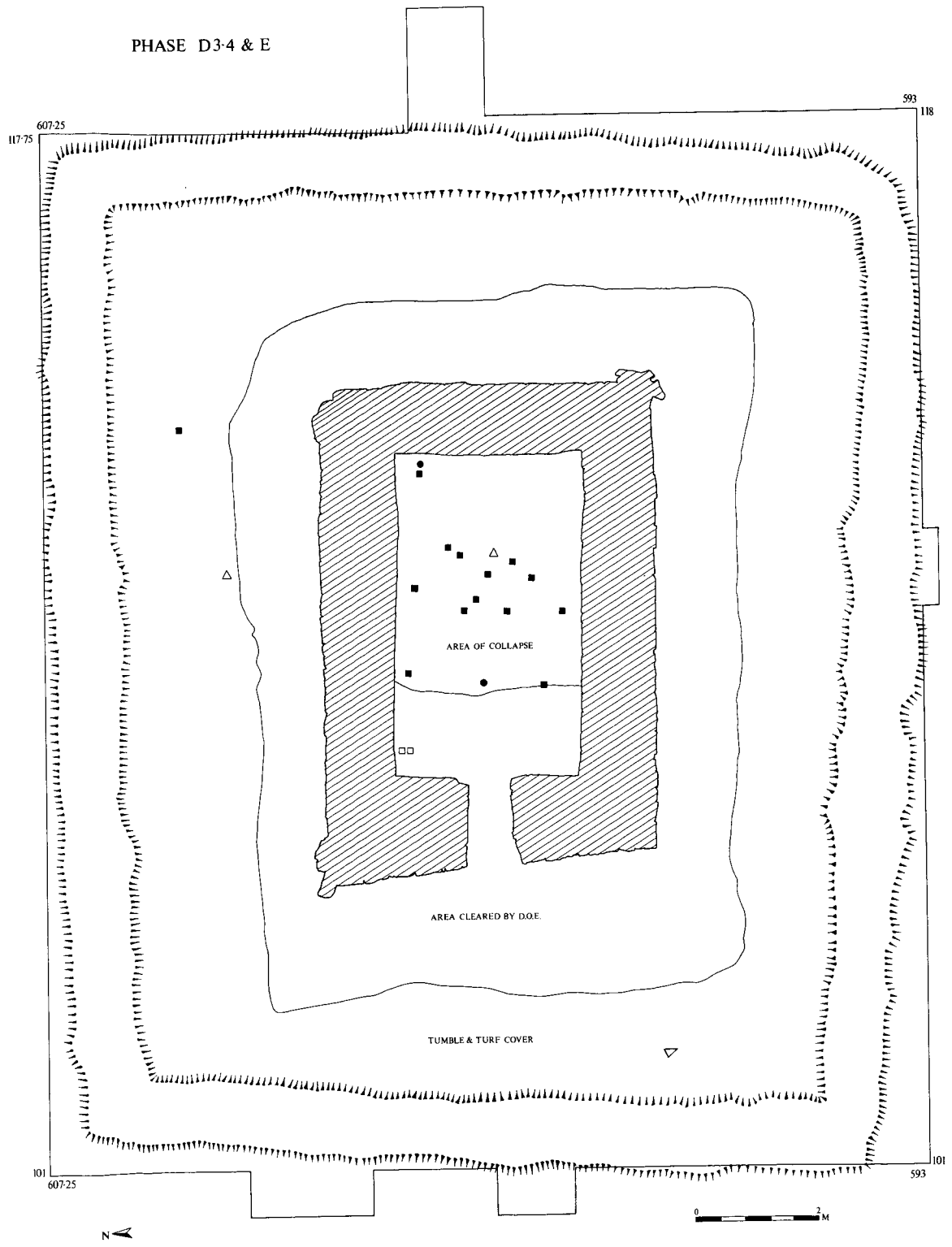


ILLUS 19 Chapel and Enclosure: Phases C3-5

PHASE D 1-2



ILLUS 20 Chapel and Enclosure: Phases D1-2



ILLUS 21 Chapel and Enclosure: Phases D3-4, E

Phase D2

Phase D2 shows a progression from decay to collapse with large stones, presumably from walls, lying on top of a thick brown clay (illus 18). One particularly large stone, unfortunately too cracked for preservation, was recorded, and it is considered likely, from its dimensions, to have been the *mensa* for the altar (however, no crosses or other markings were on it). Various metal objects were amongst the debris (RF 35–7, 165), together with a range of other material, both man-made and biological (including RFs 145 & 146).

Although the area immediately around the chapel had been cleared by the DoE squad, it was obvious that in Phase D1, some tumble had fallen off the walls and/or roof of the chapel, and in D2 a uniform dark clayey soil developed across the area within the enclosure wall. Outside the wall similar deposits were found in the small areas excavated. Finds were sparse in all areas, but included flint (RF 152) and iron (RFs 84 & 163).

Phases D3 and D4 (illus 21)

These phases are represented in the area outside the Chapel by a deposit of tumble across the whole area, from, presumably, both the Chapel and the enclosure wall. Part of a stone-tile (RF 153) perhaps indicates the nature of the former roof, and a coin of Charles II (RF 38) and a clay-pipe fragment made in 1881 (RF 39) provide indications that collapse continued until a late period. Within the Chapel two layers of extensive stone collapse were recorded. The lower (Phase D3) included a number of coins, mainly from the 17th century (RF 9–10, 13, 15–18, 33), but also iron (RFs 14 & 34), stone (RF 154) clay-pipes and more modern material. The upper tumble layer (Phase D4) contained, notably, 23 further coins with a date range of 1642 to 1806 (RF 1–2, 4–8, 11–12, 19–32). These coins are considered by Dr Robert B K Stevenson to be a pilgrim hoard (below), and in line with the traditions of votive offerings at the site. Further finds included clay-pipe fragments (see below). Total collapse of the structure had occurred by Phase D4 for even the altar was covered (see illus 54 for altar emerging after clearance by D o E squad).

PHASE E (illus 21)

The final stage in the history of the site is marked by the use of the site for target-practice. As noted above extensive damaged was caused, and the pictures of the site before clearance by the DoE squad reveal



ILLUS 22 Chapel from west, June 1974 (S D D)

the dereliction (illus 22, 52, 53). It is likely that much of the west wall, as well as the east collapsed as a result of the military activity, for Dryden's description and drawings from 1867 indicate the walls to have been upstanding far more then (see fiche 2: C9–14). Some makeshift repairs seem to have been effected by occasional visitors – particularly to the east wall (illus 54), and a 1971 new penny (RF 3) was found amongst such a repair. Within and outside the enclosure wall, sub-turf and turf developed beyond the recent stone collapse, and covered the earlier tumble from the enclosure wall.

EXCAVATIONS 1975–7: THE FINDS

Colleen E Batey and others

INTRODUCTION

The basic descriptive data relating to the artefact assemblage will be found in the microfiche section (4: A5–C14). Two hand-lists, the first a list in numerical order, and the second of finds listed by Area and Episode, regardless of material, are followed by the Catalogue of Recorded Finds. This is compiled by material type (Stone, Steatite, Pumice, Pottery, Clay Pipe, Industrial Residue, Burnt Matter, Silver, Copper Alloy, Iron and Bone), subdivided by Area and Episode. Other finds are dealt with in a similar manner (Stone, Mortar, Clay Pipe, 'Industrial Residue', and Metal). In the printed text below, discussion proceeds by material type in the order of the Catalogue in the microfiche section. As a full description is given of each object there, only particular objects meriting discussion are included here, together with (where appropriate) general comments on the collection by material. If appropriate, other finds are mentioned at the relevant point.

Consideration of the find material from Deerness has been dislocated by the lack of direct correlation between the layers within the chapel and those outside and also by the fact that part of the site had already been damaged during the War and in subsequent DoE clearance of rubble. The site failed to produce many complete or period- diagnostic finds, with the obvious exception of the coins, and thus comparison between the finds and those from other sites has been difficult. Within Orkney and northern Scotland, there is a lack of directly comparable material, resulting in the drawing of parallels from farther afield and often from different contexts.

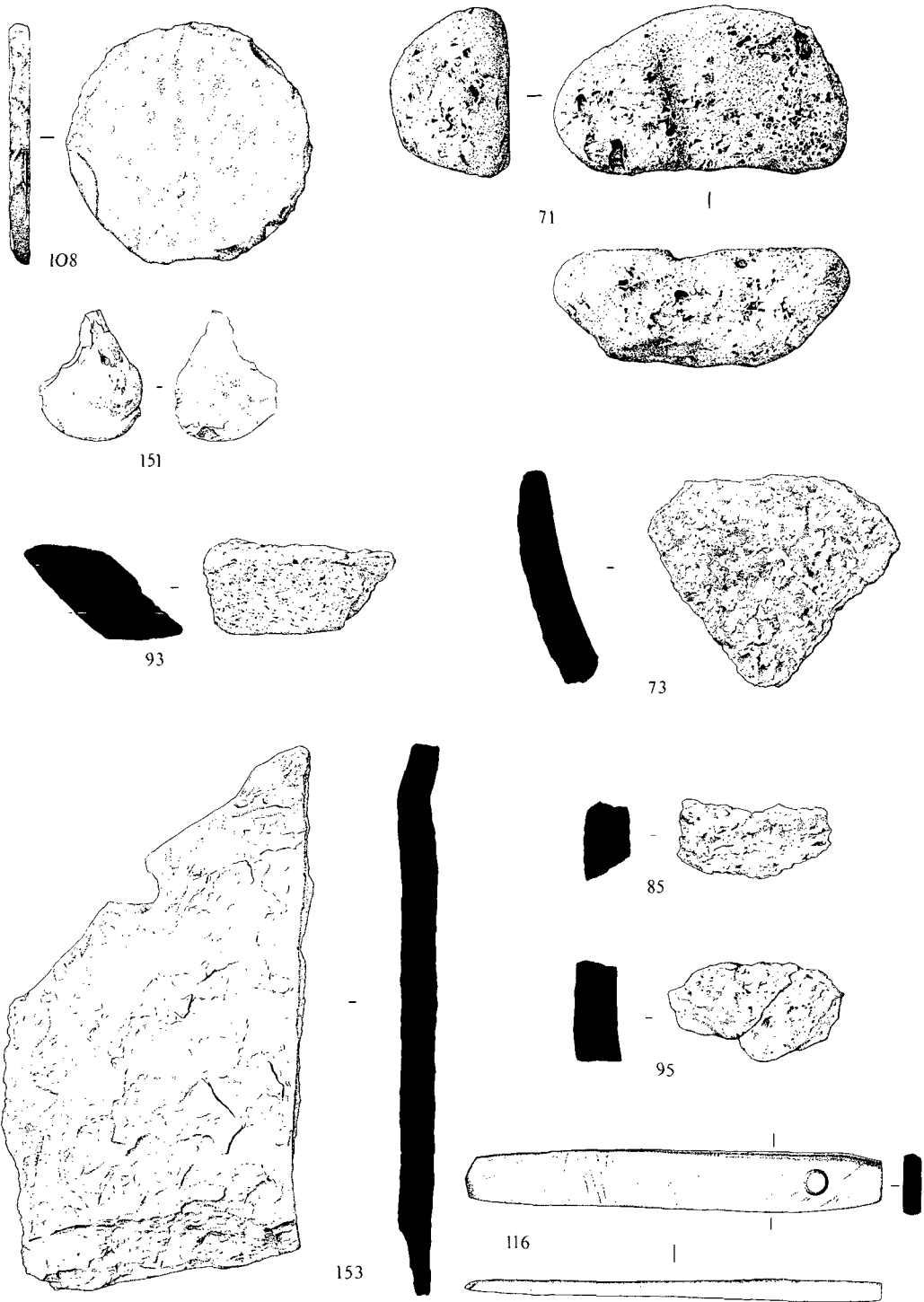
STONE (illus 23)(fiche 2: B1–4, C4–10) with Robert Young

Pot-lid (108, Phase A)

A similar pot-lid was found in a late Norse context at Freswick Links, Caithness (Curle 1939, Pl XLIX nos 9 & 10), while examples occurred at Clickhimin, Shetland in a broch context and in the settlement (Hamilton 1968, 115, fig 47 nos 3 & 141, nos 103–8). They are known at sites of the intervening periods (Hamilton 1956, 114; Batey 1984b, 307–8); they cannot be closely dated.

Whetstone (116, Phase C2)

Most of the wear marks on this small whetstone with a small perforation at one end of the stone result from use of the stone during suspension. This feature may also be seen in an example from the Lloyd's Bank site, York, find no 604 (MacGregor 1982, fig 40, 78). Similar whetstones can be found on sites of many periods: Jarlshof, Shetland (Hamilton 1956, 142, fig 65, no 17), Northampton (Moore & Oakley 1979, 281, fig 123 no 3), and from a Viking grave in Lewis, at Traigh na Berie, Kneep (Welander 1980, pl 5; Batey *et al*, forthcoming). These are all generally slightly larger in size. Very similar forms occur at the Viking site of Birka in Sweden (Danielsson & Werner 1973, fig 63, no e). Non-perforated types predominated in recent excavations at Birsay, Orkney (1973–82), although perforated examples are known (Curle 1982, 69, ill 44, nos 548–52). Although the larger stones were used to sharpen knives etc, the Deerness whetstone was probably used for sharpening needles or other small items.



ILLUS 23 Stone objects, scale 1:2.5; stone object (116), flint (151) and pumice (71), scale 1:1.25 (K McBarron)

Worked stone (38, *Phase C2*)

Of a very unusual shape, but although roughly worked there were no signs of tooling on it.

Stone tile (153, *Phases D3–4*)

This piece of mudstone, with a small perforation, is interpreted as a broken roof-tile, presumably from one phase of the chapel. There is extensive pecking around the remaining part of the perforation, and two of the sides have been squared off; originally it would have been roughly rectangular. Stone examples have come from Saxon contexts, for example Monkwearmouth, Tyne & Wear, although this is more oval than rectangular (Cramp 1969, 56, fig 24, no 4). Examples from a disturbed medieval context are recorded from Lochmaben Castle, Dumfriesshire (MacDonald & Laing 1975, 149, no 2). There are very close parallels from a 16th-century context at Southampton (Faulkner *et al* 1973, 313, fig 271). Wooden shingles are recorded at Novgorod (Thompson 1967, 39). The shortage of wood at Deerness makes use of wooden shingles unlikely.

Fragment of shore pebble with heavy burning externally (154, *Phases D3–4*)

As it is fire-shattered, this may be a pot-boiler, although it is strange that only one example was found. Presumably it was used for heating water. Fire-shattered pebbles were common at Freswick Links, and Curle gives a graphic description of one possible use for them (1939, 78–80) in a suggested ‘bath’ building. A similar example has been recovered from the site at Beachview, Birsay (BV79 HT 282) in the midden deposit lying within the structure at the site (there is a provisional C14 determination in the late 10th–12th centuries).

Worked stones (13, 26, 32–6, *Phases D3–4*)

Number 13 was possibly used as part of the *mensa* for the altar; the fine scratches on 26 are artificial but form no obvious pattern, while 32–6 may be roofing slabs or altar parts.

Flint (151, *Phase C2*)

Flint occurs in shelly outcrops on the southern part of North Ronaldsay and on coastal sites in Caithness, while chert occurs in the west coast of Orkney Mainland, Eday and Shapinsay (Wickham-Jones & Collins 1978, 11–12, 17, figs 1.10 & 2.13). Thus the raw materials present at the Brough could have been obtained from the general area without much effort. Flint and chert may well have been used, as the need arose, for the manufacture of small, simple implements for specific tasks, such as a possible borer (RF 151) from Phase C2. None of the other pieces (82, 148, 149 150, 152) is, however, of any real intrinsic interest. Taken together, the material does not argue for flint- or chert-working on a large scale in the area excavated.

Little further can be said about the other stone fragments and artefacts.

STEATITE (fiche 4: B4–5)

Two conjoining vessel sherds (95, *Phase B*) (illus 23)

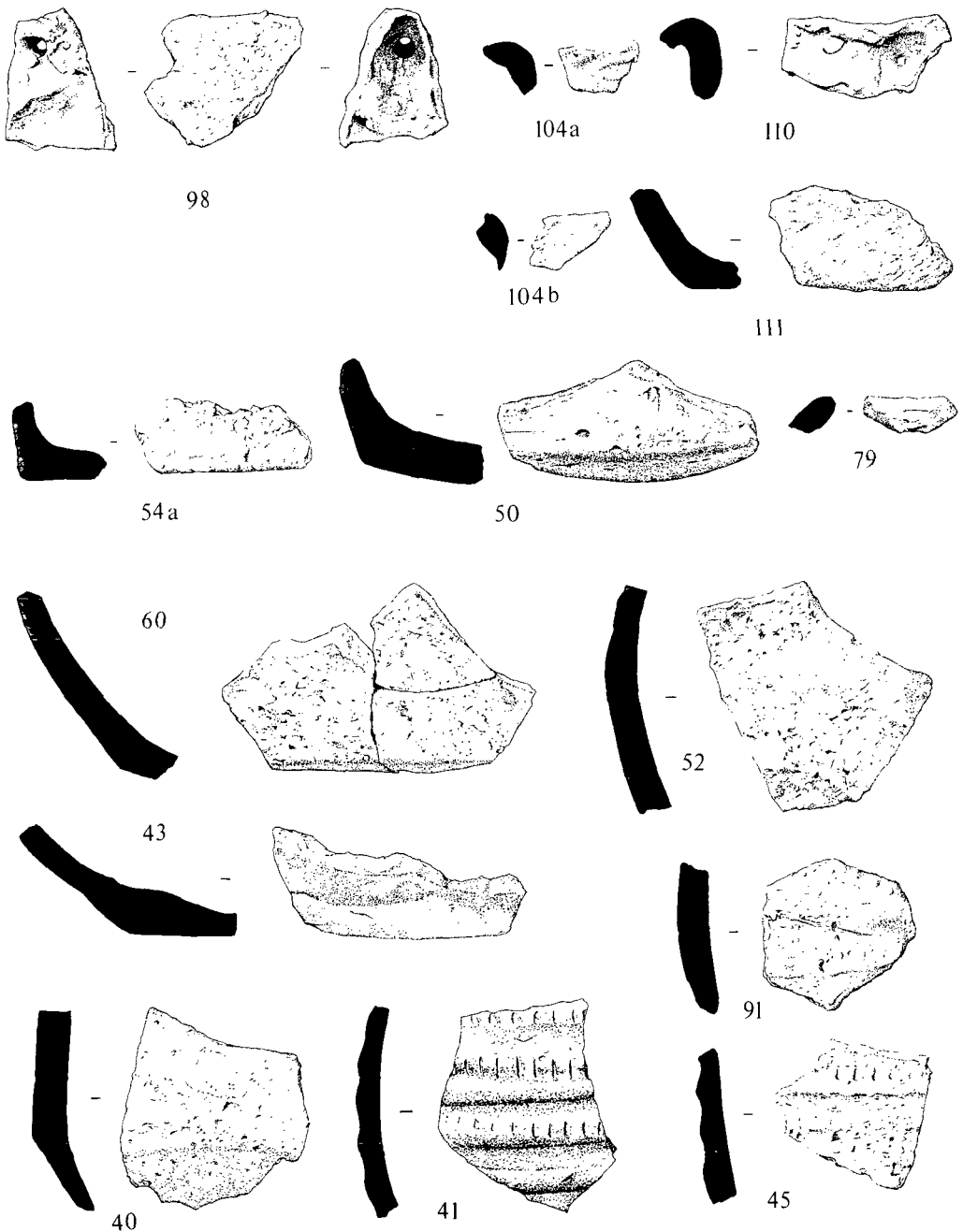
There is no burning visible along the fractures, which appear to be old. The steatite is relatively fine-grained; the vessel form is not obvious.

Very coarse-grained vessel sherd (85, *Phase C2*) (illus 23)

The interior is relatively rough and there are slight traces of burning along one fracture, possibly indicating that the vessel broke during use, as well as burning on the exterior. The vessel form cannot be determined.

Basal sherd with most of the exterior face remaining (93, *Phase C23*) (illus 23)

Made of very rough steatite, this is not burned and only slightly tooled. The small area of the original interior surface remaining indicates a rounded interior. It has a gently angled exterior face, indicating that this is not from the usual hemispherical bowl-type of vessel, and it seems that the base diameter was approximately 11 cm. It may be from a handled vessel (eg Skjølsvold 1961, fig 4a & 15–16), or a simple bowl (eg Graham-Campbell 1980, 16, no 42; Hamilton 1956, 113, fig 54).



ILLUS 24 Pottery sherds, scale 1:2 (K McBarron)

Vessel sherd tapering to a rim (73, *Phases C3-4*) (illus 23)

The sherd is straight rimmed and represents a vessel of small to medium size, diameter c 15 cm, probably a bowl. The stone is more coarse-grained than RF 95, and is closely paralleled by an example from Freswick Links in a Norse context (FL80DY 208) which, although thicker, has the same basic profile. Also

similar is an example from Birsay, which differs in that it is decorated and very highly worked and smoothed (BB77OX 2112). Other examples can be found at Jarlshof (Hamilton 1956, 113–4) and York, Lloyd's Bank (MacGregor 1982, 73, illus 373). In contrast, Scandinavian bowls often have inturned or flattened rims and the interiors are often excessively rifled (eg Landvikvannet, Aust-Agder, Norway: Graham-Campbell 1980, 16, no 41; Skjølsvold 1961, 90).

Finds 73, 85 and 95 are of steatite of variable quality and it is not possible to define the vessel forms represented. 73 is interesting because of its tapering rim, which while not unique is diagnostic. Of particular interest is the smooth interior faces of all the sherds, a feature common to many British examples but unusual in Scandinavia. Perhaps the most interesting feature about the steatite sherds is that they are best paralleled in the purely Norse milieu and suggest a Norse period at Deerness; the first group of material with a specific cultural or chronological slot.

PUMICE (fiche 4:B5)

Irregular lump (71, *Phase C5*) (illus 23)

The groove is restricted to the lower flattened surface. One side is also slightly flattened. Both may be due to wear, and the object was conceivably part of a float.

The pumice, in particular a second piece (RF 143) from Phases C3–4, was very similar to cindery material identified in this report as 'Industrial Residue' (fiche 4: B10, C12–13). It was positively identified as pumice by Ms Kate Foley of Lincoln Archaeological Trust. Pumice is a common feature on sites in the north; they must have been collected from beaches. Examples have been recorded from Jarlshof (Hamilton 1956, 61), Beachview, Birsay (BV80AC 472) and Westness, Rousay (S H H Kaland, pers comm) in Norse contexts. Hamilton also reports pieces of pumice in both fort and settlement contexts at Clickhimin (1968, 86 & 138). Both pieces are smooth, but this is likelier to be due to water wear than for use, eg on pottery.

POTTERY (fiche 4: B5–9, G5–6) (illus 24)

with David F Williams

Petrological analysis

The four basic categories of pottery fabric under consideration have been defined by David F Williams of the DoE Ceramic Petrology Project, University of Southampton and are on fiche 4: G5–6. Fifteen sherds were submitted, with two fragments of what were originally thought to be moulds, for fabric examination in thin section under the petrological microscope. The object of the analysis was twofold: first, to determine the rock and mineral content of the samples, and to see if there were any noticeable fabric differences in the material submitted, and, second, if possible, to suggest whether the sherds were likely to have been made in the area of Deerness.

Comments

The Brough of Deerness is situated on Middle Eday Sandstone deposits, which are often coarse and also pebbly, consisting largely of granite, quartzite and vein quartz. Given the petrology of the above samples, there is no reason to suspect anything else but a fairly local origin for the pottery.

Summary of pottery

Fabric 1. Phases C5 (Enclosure) & D1 (Chapel)

Hard, rough sandy fabric, reddish-brown to light red throughout with generally small sandstone and mica inclusions.

Sherds: AR 63, AR 45, AR 52*, AR 60*, AR 40*, AR 49, BU 91*, AR 55, AR 48, AR 58, AR 62b, AR 67b, AR 46, AR 41, AR 51, AR 62a, AR 67a, AR 53, AR 43 (*=sherds petrologically analysed).

Eighteen sherds can be included in this category, apparently mostly from a single vessel, with sherds 55 and 60, 46 and 48 conjoining. There are insufficient sherds to represent a whole vessel: 17 of the sherds are from a single context, layer AR of Phase D1, chapel interior during decay. The other sherd, 91 from BU, is from phase C5 of the enclosure, possibly indicating some correlation between these phases.

Thirteen of the sherds have the reddish-brown/light red fabric, but five (58, 62a, 63, 67a & b) have been burnt throughout and are therefore buff-grey in cross-section. Of the total number of sherds, 14 are wall sherds, one a rim (49), and others are basal fragments (40, 43, 55 & 60). Many sherds were clearly wheelthrown.

The single possible rimsherd is rather weathered in appearance, but seems to be of a simple, rounded slightly inturning form. The basal fragments indicate a flat, heavy base, on average 9 mm thick and suggesting a diameter of approximately 20 cm. The wall sherds vary in thickness from 5 to 8 mm, depending on their original location on the vessels. The curvature of all but 63 is slight.

The most diagnostic group comprises those sherds which are decorated (45, 48, 58, 62b, 67b, 41, 46, 51 & 62a). This distinctive horizontal rippling, with in two cases (41 & 45) additional slashed and dot impression, seems to have covered most of the vessel bodies except for the lower part and the area immediately below the rim.

The sherds show a variety of burning; some have mainly internal burning (eg 45 & 63), others have only external (eg 41), while sherds 46, 48 & 52 were burnt internally, externally and along one broken edge, ie indicating they were burnt after breakage.

Fabric 2. Phases C2 (Enclosure) & D1 (Chapel)

Hard rough, sandy fabric with prominent inclusions, normally light to dark shades of reddish-grey. Some have vegetable tempering and others have vegetable impressions on the outer faces. This category includes a variety of fabrics, and therefore sub-categories have been designated.

Fabric 2(a) pale orange-pink with large inclusions of sandstone and quartz: 11 sherds, four examined petrologically.

Fabric 2(b) coarse black fabric with grass-tempering: 31 sherds, three examined petrologically.

Fabric 2(c) orange-grey fabric, relatively dense with inclusions larger than Fabric 2(a): five sherds, four examined petrologically.

Fabric 2(d) dark grey fabric with very large inclusions of sandstone: three sherds, two examined petrologically.

These 50 sherds fall within three phases: Phase D1 chapel interior decay (AR), 20 sherds; associated with this decay, a layer of burning (BF), 14 sherds; Phase C2 of the enclosure (BD), 16 sherds.

Fabric 2(a)

Phase C2: RFs 97, 98, 102-104(a & b*), 105-107, 109, 110 from layer BD.

These 11 sherds form a distinctive group from a single context and possibly representing a single vessel. Six are small wall sherds and it is difficult to comment on their possible position in a complete vessel. 98 and 104b appear to be abraded rimsherds, both representing a rounded, slightly out-turning rim profile; they do not conjoin. 98 is perhaps the most intrinsically interesting in this group: it is formed by clay rolled over on to itself. A circular perforation passes horizontally through, allowing perhaps the passage of a cord or thong, apparently for suspension. However, it cannot categorically be termed a rim, as the wall to which it is attached is some 27 mm wide; it could alternatively be a simple perforated lug handle with the thickness remaining representing the side of the vessel. It is conceivable that 97, 105 and 110 were waste products, owing to their contorted appearance, with 97 having a dished appearance and being relatively flimsy; its form is more likely to be accident than design. There are no traces of burning on any of these sherds.

Fabric 2(b)

Phase C2: RFs 117* & 121 from layer BD.

These two sherds form the extreme of the type, being finer in appearance and considerably less coarse in fabric. Sherd 121 is a rim fragment, being rounded and slightly everted, 117 is a wall sherd. These are very slightly grass-tempered. Sherd 117 is unusual in its thinness, being only 4 mm thick.

Phase D1: RFs 66a & b, 64, 68a*, b-j from layer AR.

The fabrics within this group of 15 fragments range from sherd 68a which has a lighter brown-grey fabric and voids indicating grass-tempering, to 66b with dark fabric more clearly grass-tempered and with quartz inclusions and 64 which is of dark fabric, very coarsely tempered with grass and large sandstone/quartz inclusions: the common factor is vegetable tempering, resulting in some cases in very small and fragmented pieces. The variation in surface colour due to differing reduction conditions is relatively small, ranging only from reddy-buff to reddy-brown. All the sherds seem to be from vessel walls. Sherds 64, 68b and c have carinations and although 64 may be from a rim, it could equally be from a base or handle base.

Phase D1: RFs 54a–b, c*, d–e, g–o from layer BF.

Thirteen of these sherds are wall sherds and the other, 54a, is a basal/wall junction sherd indicating a straight-sided flat-bottomed vessel. The fabric is coarse and handmade, with traces of vegetable tempering; the number of small fragments implies a fragile fabric; the base fragment is the largest because it is the thickest. It seems to represent a small vessel of diameter 7 cm. The average wall thickness is 7 mm, whereas the base is 9 mm. The sherds present seem to come from a single vessel. There are traces of burning on all but 54a and 54m. No precise vessel form can be ascertained; the friable and coarse nature of the fabric might indicate it would not have been very elaborate.

Fabric 2(c)

Phase D1: RFs 44a*, 44b, 50*, 61*, 65* from layer AR.

This group of five sherds includes two large joining basal fragments (50 & 43), giving a basal diameter of approximately 10 cm. They indicate a flat-bottomed vessel with the sides sloping at an angle of about 100°. The average base thickness is approximately 12 mm, and the average wall thickness 6–7 mm. Sherd 43 is more extensively burned than 50. This fabric is generally finer than the others in the group, generally lacking the larger inclusions.

Sherds 44a and b and 65 are similar, having occasional obvious large inclusions and grass-marked exterior faces; Sherds 44a and 65 have grey bands within the fabric, perhaps indicating differential reduction. 44a is slightly inturning, a rounded rim fragment, 61, although coarser than 65 and 44a and with slight vegetable tempering, appears to be of a very similar type. It has an internal burnt deposit.

Fabric 2(d)

Phase C2: RFs 92*, 94*, 111 from layer BD.

These three sherds are unusual in their extreme coarseness; the inclusions are larger than noted in other sherds from the site. 92 and 94 are wall sherds, 111 a basal/wall-junction fragment indicating a flat-bottomed vessel of diameter c 7 cm, the walls are at an angle to the base of 100°. The average wall thickness represented is 9 mm, and the base only 8 mm. Sherd 94 has slight traces of a burnt deposit on the exterior face.

Fabric 3. Phases C2 (Enclosure), C3–4 (Enclosure) & D1 (Chapel)

A hard, rough and slightly sandy fabric, dark grey throughout. A clean clay matrix and a scatter of quartz grains, mica flecks and fine-grained sandstone chips. All sherds in this group are very similar to each other.

Phase C2 RFs 101, 115a & b from layer BD. Although 115a & b are slightly coarser than 101, there are very close similarities in the fabrics. 115, two wall sherds, have dark grey fabric with a pink-orange external face; 101, a rimsherd, has the same coloured fabric but has pink-orange coloration on both internal and external faces. The rim is rounded in section, and rolled over externally.

Phase C3–4 RF 81 (+) from layer BT. This single wall sherd has a dark grey fabric throughout. It is relatively fine, in comparison to others of the group and, as with 57, has slight grass-marking externally and possibly very slight grass-tempering.

Phase D1 RF 54f from layer BF. Similar fabric to 101, dark grey throughout and on external faces.

Phase D1 56, 57, 59, 144 from layer AR. Sherd 144, a simple wall sherd, very similar to 101, is relatively finely made and dark grey throughout. Rimsherd 57 has a finer fabric and traces of grass-marking, if not tempering. The rim is slightly flattened and inturned and the slight curve on it, if consistent around the vessel, could indicate a vessel with diameter of c 9 cm. Sherds 56 and 59 are slightly different from these types, having dark grey fabric and brick-red exterior face. The fabric is relatively dense and the section indicates slight grass-tempering. The difference in thickness between these two sherds (56 is c 10 mm, 59 c 7 mm) could indicate that they come from different parts of the same vessel.

Fabric 4. Phase C4

Heavily shell-tempered fabric.

Phase C4 RF 79 from layer BN. The only sherd representing this kind of fabric is a simple, slightly rounded rimsherd. It has a very slight curve on it, both horizontally and laterally, which cannot readily be explained except by possible warping, possibly once more suggesting a waste product.

GENERAL COMMENTS

Despite the variety of fabrics represented at the site, petrological analysis indicates nothing other than potentially locally-made vessels. Individual characteristics can be paralleled at other sites, but most cannot be dated with any precision. Fabric 1, for example has broad similarities with sherds from later medieval contexts at Freswick (eg Freswick Castle 1979, AA, 1: Batey *et al* forthcoming; Freswick Links 1981, MB, 1). Precise parallels cannot be located for the distinctive decoration (L Thoms, E Talbot, A Lane, pers comm). FL81MB is much more heavily coarse-gritted than the Deerness example, while the sherd from Freswick Castle has slight traces of glaze; but, regardless of these differences, the wheelthrown nature of the sherds in this group indicates a later medieval date.

The variety within Fabric 2 enables more comparable material to be considered. Within Deerness Parish itself, types 2(b) and 2(c) have parallels from an eroding midden at Ayre (HY 5852 0384) where two sherds have been recorded (fiche 2: B7). It is likely that they are medieval handmade wares. Grass-tempering is seen on many sites, but cannot be used as a cultural or precise chronological indicator (Ritchie & Lane 1980, 217). The grass-tempered sherds from Freswick, in a Norse context, are much less dense than the Deerness examples, and tend not to include grits. The silty nature of Fabric 2(a) also cannot be precisely paralleled; for instance, the presence of grits distinguishes it from mould fragments from sites such as Birsay (Curle 1982, 26–39). The particularly interesting sherd 98 may originally have been similar in form to examples from Jedburgh Abbey (Cruden 1956, 77, fig 14), if the proposed identification as a form of handle is acceptable.

Fabric 3 is a very coarse fabric, with large inclusions at one end of its range. It has similarities with two sherds now in the National Museum, Edinburgh found by Farrer 'in the course of digging in the ruins of an old house in the parish of Deerness, Orkney' (GG 13 & 28: fiche 2: B8–9). The very coarsest of the fabrics appears to have more similarities with sherds from a broch context (eg Freswick Links 1980, Area 1), but such an attribution cannot be supported by other archaeological evidence on the site.

The single sherd (RF 79) of shell-tempered fabric (no 4) is unusual; fabrics with this amount of shell content cannot be located. It may not be pottery at all, but simply a clay fragment. Although it has been suggested that some sherds may be wasters, this seems unlikely for this sherd as the fabric is different; in any case there is no evidence of a production centre nearby.

Overall, there are insufficient sherds to provide detailed information about vessel forms and types. Basal sherds (especially Fabric 1) indicate flat-bottomed pots, and the few rims available show very simple forms. 101 is a possible exception, closely paralleled at Dun Cul Bhuirg, Iona (Ritchie & Lane 1980, 218, fig 3, no 4) in a presumed Iron-Age context, although the sherd is lost and its precise context obscure since it is the result of an early excavation.

CLAY PIPES (fiche 4: B10 & C12)

with Lloyd J Edwards

Phases D3–4

RF 39 (illus 25); clay pipe-stem of late 19th-century manufacture (cf Oswald 1975, 206). AK, bag 3: two stem fragments of late 16th/early 18th-century manufacture. AA, bag 2: stem & bowl fragment: similar late 17th-century types are illustrated by Oswald, with the same tailored base (1975, 35, fig 2, no 10). Scottish and northern English examples are also shown (Oswald 1975, 43–4, 45, fig 5N & 5NE). Because of the absence of a base-stamp and the majority of the bowl, it is not possible to date this fragment precisely.

AA bag 2: two stem fragments of late 17th-century types.

AA bag 2: stem fragment of late 18th-century manufacture.

Diagnostic features are lacking. The context for these pipe fragments are all late in the site sequence, from the tumble in the chapel. 39 is explicable as a residual artefact from the well-documented 19th-century visits to the site.

INDUSTRIAL RESIDUE (fiche 4: B10, C12–13)

J Gerry McDonnell

The term 'slag' has been used to refer to a wide variety of residues derived from all pyrotechnological processes and often inevitably includes, during finds processing, 'natural' ferruginous material and heavily

corroded objects. In many cases, the distinction between the 'natural' material and the corroded object is very slight and can only be resolved by laborious destructive analyses.

The material sent for identification derived from five contexts. The weights and volumes from each were very small and so only a limited examination and identification was made. Four material types were distinguished. Sample ED, bag 1 (Phase B1) was identified as ferruginous material, possible originally an iron fragment. Energy dispersive X-ray analysis showed a group of samples to be 'Organic' (AL bag 1 & RFs 145 & 146; BD, bags 3 & 12; BN & CA: Phases B1, C2, C4 & D2). The principal component was calcium; they probably represent bone. Two slag types were, however, identified.

Smithing slag

Phase C2: RF 139 from layer BD

The specimen included a considerable amount of foreign material. The bottom of a smithing hearth is formed by the accretion of slag during the working of iron. It commonly occurs in plano-convex form. The microstructure of the sample is typical of smithing slag: it consists of rounded iron oxide dendrites and broken massive Fayalite (an iron silicate) with a small quantity of glass phase present. This small hearth bottom indicates a very low level of iron smithing on or near the site.

Fuel-ash slag

Phase C2: RF 77 from layer BD

A very small fragment. This slag is found in association with all types of pyrotechnological process and is probably formed by a reaction between the fuel and high silica bearing material eg sand and clay. A common find on many sites.

SILVER (other than coin) (fiche 4: B11)

Fragments of fine silver wire, set roughly in an arc (89, *Phase C2*).

Initially this was thought to be some form of embroidery as, for example, at Ingleby (Crowfoot 1956, 52–3). The silver is very base and set in an organic deposit, which may represent a covering or be composed of rootlets (ident J Cronyn). This suggestion is, therefore, unacceptable.

THE ANGLO-SAXON SILVER PENNY AND ITS CONTEXT (fiche 4: B10–11)

R B K Stevenson

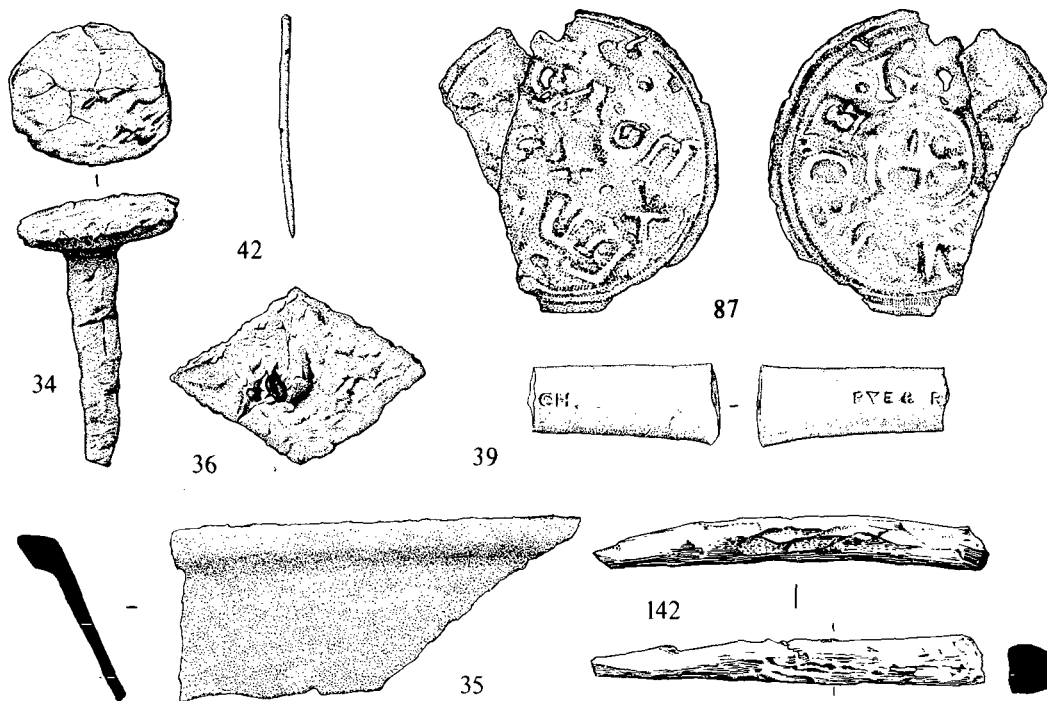
(Phase B1 Silver coin, 87) (illus 25)

Eadgar (959–75), BMC type 1 (three crosses with moneyer's name in two lines, and three pellets above and below). *obv*, around small cross patee +EΛ·(?) DG·Λ· RREX, *rev*, GRIÐ/ИоИЕ (o with small solid triangle to right, like a Q); chipped and broken into three pieces.

Grith or Grið was one of the relatively commoner moneyers in the Iona hoard, with eight coins and only one case of a die duplicated, and none duplicating the dies of this one (Stevenson 1966, nos 414–22, pl XVI). It is not known elsewhere either. By his style of lettering, he is thought to have worked in the Lincoln/Stamford area.

Although considerable numbers of Anglo-Saxon and contemporary silver coins have been found in Scotland in Norse hoards, isolated finds have been very scarce, only six singles being known for the synopsis in 1966 in *Sylloge of the Coins of the British Isles, Edinburgh* (NMAS) I (Stevenson 1966). Now there are a further 11, mostly from archaeological excavations, four or them from the Norse settlement of the Brough of Birsay, and all from Orkney except one in North Uist.

A distinction emerges more clearly between 10th-century Anglo-Saxon coins which are, it seems, never pierced for suspension (wearing) or attachment to something, and those of the ninth century, a majority of which are pierced, whether found singly or in small hoards with ornaments. Talnotrie, Kirkcubrightshire – one at least out of four (Stevenson 1966, 60–3) Croy, Invernesshire – both (Stevenson 1966, 59, 82). By the 10th century their mutilation was perhaps inhibited by a potentially monetary or exchange function, which coins issued from distant places did not have (Stevenson 1966, xvi). This was presumably reinforced in the 11th century, when Norway was striking coins of its own, a century before Scotland.



ILLUS 25 Metal objects: silver coin (87), scale 2 : 1 (N Emery); copper alloy pin (42) and vessel rim (35), iron rivet (34) and plate (36); bonc (142) and clay pipe (39), scale 1 : 1 (K McBarron)

The total list of finds outwith hoards (defined as three coins and upwards, or fewer if with ornaments or 'hack-silver') is now: (* noted since 1966; o provenance corrected; † pierced)

- 1 *†Burgred, type d (866–8), Tata; found in 1977 at Saevar Howe, Birsay, Orkney (Batey & Morris 1983, 93–4).
There are no previously recorded Burgred coins from Scotland other than Talnotrie nor any Anglo-Saxon coins from Uig in Lewis (*contra* Batey & Morris 1983, 93, cited owing to a misunderstanding), and only the Eadmund coin from Buckquoy (*contra* to *ibid*).
- 2 †Aelfred, type 1; from Burghead, Moray (Stevenson 1966, 81).
- 3 Aethelstan; recorded at Jedburgh (Stevenson 1966, xx).
- 4 *(Eadmu)nd re(x), type 1 with three pellets, (Baldu)uin, cf 203—less probably Aethelwine or other -wine; cut halfpenny in Norse grave at Buckquoy, Birsay, Orkney (Ritchie 1977, 190 & 201, reign only given).
- 5 *Anlaf Sihtrricsson, triquetra type (York); found 1969–72 at Newark, Deerness, Orkney, by D R Brothwell (Brothwell 1977, 182, without identification).
- 6 *Eadred, type 1 with rosettes and circles, Aelfisige; found at Newark as foregoing.
- 7 *Eadgar; Brough of Deerness, as above.
- 8 *Eadgar, type 1, Agulf; found in 1980, Brough of Birsay, Orkney (C D Morris, forthcoming).
- 9 *Eadgar, type 1, Farthein; stray at settlement site, Galson, Lewis.
- 10 *Eadgar; recorded from Bonjedward, Jedburgh (Stevenson 1966, xviii).
- 11 *Aethelraed II, 'first hand' type, York; from the Norse settlement, Jarlshof, Shetland (Stevenson 1966, 656).
- 12 *Aethelraed II, Crux type iia, Edric, Cambridge; found 1979, Brough of Birsay, Orkney (C D Morris, forthcoming).
- 13 Aethelraed II, 'last small cross' type (c 1009–10), Mana, Lincoln; found in 1979, Brough of Birsay. (J R Hunter, forthcoming).

- 14 *Hiberno-Norse, imitation Aethelraed, nonsense legends; from Whithorn, Wigtownshire before 1911 (Dolley & Cormack 1967, 122–6).
- 15 *Norway: Harold Hardrada, *obv* triquetra *rev* voided short cross, three pellets in two quarters (c 1055–65); found in 1970 in the Norse settlement levels at the Udal, North Uist (Dolley & Skaare 1973, 221–7).
(With it they published a coin of the same type from a previously unknown hoard acquired by the Royal Coin Cabinet, Copenhagen. in 1844 from William Bain, Lerwick; recorded as found in the glebe (Priestergaard) of Dunrossness parish, Shetland with others ‘similar’ and silver arm-rings cut in pieces—see also Graham-Campbell 1976, 123.)
- 16 *oNorway: Olav Kyrre, type Y 14, *obv* very stylized head *rev* voided short cross (c 1080); found 1937–now known to be from the Brough of Birsay graveyard, not that of Jarlishof (Dolley 1968, 193–5).
- 17 Arab *dirham*, cut fragment, early 10th century; from Ardeer, Ayrshire (Stevenson 1966, 696).
An English penny of Cnut, type xvi, was on sale in London in 1975 as coming from the island of Mull, but its patina (Stevenson 1966, vii) together with the type showed that it came from the hoard found at Caldale in Orkney in 1774.

COPPER ALLOY (other than coins) (fiche 4: B11, B14)

Fragments of copper alloy (119, Phase C2).

Copper alloy pin (42, Phase D1) (illus 25)

This shaft-fragment is undiagnostic in its surviving form. It may be part of a simple bronze needle similar to examples from Freswick Links (HR 1011, Batey 1984b, 240, pl 25D) or from Northampton (Williams, J 1979, 261, fig 113, nos 153, 185 & 220).

Pieces of copper alloy (69.2 Phase D1)

Possibly the end of a pair of tweezers similar to types from Freswick (Batey 1984b, 236, pl 24c), although one fragment lacks form and the other is a small splayed piece bent double.

Copper alloy vessel rim- and body-fragment (35, Phase D2) (illus 25)

This rim-piece, from a vessel of diameter approximately 19 cm, is of very simple form and completely lacking carination and decorative features. Although bronze vessels are known from Norse contexts (eg possible vessel patch from Freswick: Curle 1939, pl L, no 8), it was in the later medieval period that the cast bronze vessel became most popular. Similar simple types are widespread (eg Yorkshire, Le Patourel 1973, 91; Northampton, Williams, J 1979, 259, nos 96 & 97, fig 112), and examples from London (London Museum 1940, 199–207) are ascribed by Ward-Perkins largely to the 14th century. There are examples of more decorative types containing coin hoards, an example from Dunfermline being deposited c 1345 (London Museum 1940, 199), but, if this was similarly used, as the coins from Deerness date to the 17th–19th centuries (see below), it must represent reuse. It is from a late context.

The cast bronze vessel fragment (RF 35) is probably originally later medieval, although found in a late phase of the site. The other two finds and the fragments from Phases C2 (RF 119) and D2 (RF 37) do not assist the chronological interpretation of their context.

COPPER ALLOY COINS (fiche 4: B11–14)

R B K Stevenson, with P H Robinson

England

- 1 James I. Farthing, Lennox issue (16-). Crown and lis on sceptre, large, Details corroded but little wear. Excavation, RF 16, Phase D3.

Scotland (See Murray & Stewart 1972)

Charles I: third issue turners, C R (1642–)

- 2 Type Ia Little wear. Excavation, RF 4, Phase D4.
3 Ia Large N. Little wear. Preliminary work, RF 12, Phase D4.

- 4 I or II Well worn. Preliminary work, RF 2, *Phase D4*.
- 5 II Little wear, heavily corroded. Excavation, RF 15, *Phase D3*.
- 6 II Worn but more corroded. Preliminary work, RF 11, *Phase D4*.
- 7 III or IV. Badly double struck (uncleaned). Excavation RF 18, *D3*.
- 8 IV var. .DG. Little wear. Excavation, RF 17, *Phase D3*.
9. ? Badly double struck. Worn. Excavation, RF 10, *Phase D3*.

Charles II: turners C R II (1663–68)

- 10 Mint mark pellet cross on both sides, 'Gothic' S. Little wear. Half not struck-up or much corroded. Preliminary work, RF 1, *Phase D4*.
- 11 ? and seven-pellet rosette. Well worn. Excavation, RF 33, *Phase D3*.
- 12 Four large pellets above cross and orb, and ? 12½ mm thistle. Little wear. Preliminary work, RF 20, *Phase D4*.
- 13 Small cross and ? cf Burns 3–4, v. long stalk, complete R, convex *rev*. Corroded more than worn? Preliminary work, RF 19, *Phase D4*.
- 14 ? ? of B.3, right thistle-tip near final stage. Corroded more than worn. Preliminary work, RF 23, *Phase D4*.
- 15 Small cross and four pellets, cf B.4. Well worn. Excavation, RF 6, *Phase D4*.
- 16 Small cross and ? R complete. Corroded more than worn. Excavation, RF 38, *Phases D3–4*.
- 17 Small cross, and pellets, R broken. Much corroded. Excavation, RF 5, *Phase D4*.
- 18 ? ? broken R. Little wear, but not all struck-up? Excavation RF 9, *Phase D3*.
- 19 C R II ? ? Much worn, *rev* convex, hammered? Preliminary work, RF 21, *Phase D4*.
- 20 Bawbee (1677–79) SCO. Well worn. Preliminary work, RF 22, *Phase D4*.
- 21 Charles ? Turner ? Worn smooth, 'crooked'. Preliminary work, RF 32, *Phase D4*.
- 22 – Turner ? Blank, concavo-convex. Excavation, RF 8, *Phase D4*.

William II: turner (bodle) (1695–97)

- 23 Upright sword-sceptre saltire. Almost smooth, convex, hammered. Preliminary work, RF 24, *Phase D4*.

France

- 24 Louis XIII. Double tournois, laureate bust draped, right, c 1630. Well worn. Excavation, RF 13, *Phase D3*.

United Kingdom

George III. Halfpennies (incorporating additions and corrections by P H Robinson)

- 25 Hibernia 1766. Counterfeit – cast from worn coin but little worn? Preliminary work, RF 27, *Phase D4*.
- 26 Hibernia 1769. Counterfeit (crown and figures) but full weight. Considerable wear. Excavation. RF 7, *Phase D4*.
- 27 Britannia 1772. Counterfeit (King's face and ribbons). Well worn. Preliminary work, RF 25, *Phase D4*.
- 28 Brittonia 1775. Counterfeit (spiral curl), abnormally small flan, very light. Little worn, much corroded. Preliminary work, RF 29, *Phase D4*.
- 29 Britannia 1775. Counterfeit (B's hand and neck drape). As 28. Preliminary work, RF 26, *Phase D4*.
- 30 Hibernia 1776? Counterfeit (poor harp) small flan. Much worn. Preliminary work. RF 28, *Phase D4*.
- 31 Penny 'cartwheel' 1797. Very little wear. Preliminary work, RF 31, *Phase D4*.

Trade Token, etc

- 32 Montrose halfpenny 1796. Dalton and Hamer No 28. Little wear, *obv* totally corroded. Preliminary work, RF 30, *Phase D4*.
- 33 Elizabeth II, new penny (1971–). Excavation, RF 3, *Phase E*.

In 1976 a Deerness informant gave Mr E W Marwick a list of coins recovered from the ruins of the chapel by three finders, all halfpennies: George II, 174(?) one; Irish 1751 one; George II, three(?); Edinburgh trade token 178(?) one; foreign, one; similar coins, four. He also stated that those of which he had personal knowledge had been sandwiched between two thin stones (fiche 2: G9).

VOTIVE COINS DEPOSITED BETWEEN 1600 AND 1800 IN ORKNEY AND ELSEWHERE

Robert B K Stevenson

Little is known of the once popular pilgrimages to the now vestigial ruins of the medieval chapel at the Brough of Deerness. The Royal Commission's *Inventory* (1946, II, no 621), noted that they continued as late as the end of the 17th century, citing the Rev James Wallace (*recte* 1693, 33–4). Of the many chapels in Orkney, those

‘to which most frequently they made their pilgrimages, were to the Chapel at the Brough of Birsá and to the chapel of the Brough of the Mulehead [Mull] in Deirness, those two standing at the furthest extremities of the Mainland . . . nor to this hour [1668–88] are these Pilgrimages omitted by the common People, who still for the obtaining of some good or deprecating some evil, do frequent some Chapels that they have most veneration for (see fiche 2: C7).

The dedication of the chapel and the precise purpose of the pilgrimages are, it appears, alike unknown, although there was some sort of survival to the end of the 18th century. Dr Hugh Marwick knew of this later veneration, of which this note gives further evidence (1951: see fiche 2: F1–2).

The main source of information, cited by the Commission and others, is the probably late 16th-century writer ‘Jo Ben’; copies of whose manuscript *Descriptio Insularum Orchadiarum* bear the date 1529 (Advocates MSS 33.2.3; Macdonald 1936). He devotes one of his longer descriptions to this site, its difficult approach, the spring of sparkling water, and the curious pilgrimage, but leaves many obscurities.

The ‘*sacellum* which we call “*ane chapell*” has the name of “*ye Bairnes of burghe*”. Thither they stream from the various islands, men, youths, boys, old men, *servi innumerabiles*’.

Whether servants is their status in life, or whether this is a religious use of the word as in Gilchrist or *Servus Servorum Dei*, is a possible question. The Commission, following Marwick’s sound advice (1925: see fiche 2: E2), suggested that *bairnes* is a corruption of Norn *boenhus*, prayer-house or chapel, but Jo Ben seems next to take it rather in its Scots sense:

‘coming on bare feet, praying they ascend --- then the men with bended knees and hands together “*diffidentes esse Deum*” [either using brackets as quotation marks as he did previously, or to show his interpretation because of his difficulty in understanding who was invoked] *orant ye Bairnes of Burghe*. With these incantations throwing stones behind their backs they walk two or three times round the chapel. Returning home when the invocations are ended they affirm *se vota habuisse*’.

Whether these vows they have made were before or during the pilgrimage is again unclear. The tolerant final comment ‘Here they do not worship (*colunt*) God purely’, does not suggest that the writer really intended to report that the pilgrims were distrusting of the existence of God. Nor, however, does it suggest that the pilgrimage was the continuation or intensification of one that had earlier had the blessing and participation of the pre-Reformation Church.

In March 1974 16 copper coins, half of the 17th-century and half of the 18th-century in date, were found while the turf was being stripped from the chapel. A further 16, all but one of them of the 17th century, were found in 1975 within the chapel; two were on the already disturbed surface and 14 in the rubble. They were mostly heavily corroded but when the first batch was examined it was evident that a majority had been only slightly or moderately worn by circulation. Since these spanned the greater part of two centuries it was concluded that they had been deposited individually. For in a single hoard coins tend to exhibit wear relative to their age, even when put together over a period. Further the relatively small amount of wear overall excited surprise, and suggested that some care and effort had gone into the original selection. For a normal feature of surviving 17th-century copper coins is considerable or indeed excessive wear, while later the state of coins was even worse. The

scarcity of minted money resulted, particularly in the late 18th century, in the constant circulation of ultimately often featureless discs, silver as well as copper. This is known from contemporary records, and published finds of hoards from England and Scotland (Robinson 1972; Stevenson 1972; Macdonald 1916). The widespread use of commercially issued 'trade tokens' in Scotland from 1787 was one response to this, and the quantity of counterfeits to some extent another.

The tradition of pilgrimages to the Brough provides a reasonable explanation for the occasional individual deposition of coins. Indeed there are records both of deposition and finding coins at another Orcadian chapel, St Tredwell's on Papa Westray. The Rev J Brand wrote (1703, 58–9):

'If they be under any Sickness or in any danger at Sea, they will vow [to go to pray at a chapel]. And when they go to the Chappels to pay the Vows taken on, they used to lay several Stones one above another, according to the number of vows which they made; some of which heaps we saw in St Tredwells Chappel. And none must go empty handed, but leave behind them something, either a piece of Money, or of Bread, or a Stone, which they judge will be sufficient.'

When St Tredwell's chapel was excavated before 1883 by William Traill (*Soc Antiq Scot* 1883). 'In clearing the stones and rubbish out of the chapel we found on the floor level 30 copper coins, consisting of 21 of the reign of Charles II, three of George II, two of George III, two French and one Dutch.' The waters of the adjacent small loch were supposed to have curative powers, derived from the Saint.

Brand also wrote (1703, 92) about the old church at Weisdale in Shetland:

'much frequented by the Superstitious Country People who light candles therein, drop money in and about it, go on their bare knees round it, and to which in their Straits and Sickness they have Recourse . . . it was much frequented by Women, who when they desire to Marry, went to this Church making their Vows and saying their Prayers there . . . But this is now not so much in use as formerly.'

A century later Edmondston (1809, 11, 75) wrote of the ruins of this old church 'several coins have been found, at different times, concealed in the walls of this Loretto of Zetland'. Later still (*New Stat Acc*, 1843, 15, 69) money was said to have been gathered up by a recent elder for the poor box.

It has recently been noted (Lowe, pers comm & forthcoming) that there are records for another former pilgrimage chapel-site in Shetland – Crosskirk, Clibberswick, Unst – that 'old coins have often been found at and about (the ruin)' and that 'coins were found quite lately in the wall' (Edmondston 1872, 285; Saxby 1905, 135); and that a late 17th-century copper coin was found wedged into the altar at St Ninian's Isle, Shetland (Small 1973, 3n).

We may compare those with the contents of the holy well at the former village of Inschadney near Kenmore, Perthshire, deserted about 1800. These were found to be a farthing of George III 1806, two copper coins featureless through corrosion which can from their size be almost certainly identified as the little second issue turners of Charles I 1632–38, three flat metal buttons of different sizes, probably 18th-century, six wire head pins, and a glass bead (Gillies 1926; NMAS NO 62–6). The gap in this coin sequence may have been due to earlier clearances of the well.

Though brass pins would have corroded to powder at Deerness, the stains would have been seen by the excavators, unless they were only in the part of the 18th-century level that was stripped before excavation. The apparent tendency there to deposit the freshest coin available, rather than one adequate for everyday transactions, may suggest the depth of anxiety involved. Interpretations of relatively recent votive deposits, however, and the recording of trivial ones of any age, have figured little in archaeological literature. It may perhaps also be noted at Deerness that the coin of highest value, one penny English, was the latest in the continuous sequence as far as we know; some previous casual finds, which can be listed through the enquiries of the late Ernest W Marwick, included an 1860 halfpenny, and further finds (fiche 2: G9). These have still to be located or examined.

A small numismatic point is the incidence of badly struck 17th-century coins both at Cargen and Deerness, such as do not usually get into modern collections, but were in their day probably not out of the ordinary.

The absence of all but one pre-1640 coins is striking, particularly the very common Charles I second issue turners, of which there is an Orcadian hoard (Stevenson 1959). James VI twopence Scots, 1613 and 1624, are far from uncommon but were not found at St Tredwell's either, while Mary hardheads, and any other coins as early or earlier, were not found at any of the four widely distant sites here considered. At this level of religious observance a 'money-economy' seems to have come late in rural Scotland, and to have coincided with the decline in the number of votaries. (A single coin of James I of Scotland said to have been found in a well at Culsalmond, must be a separate phenomenon (*New Stat Acc*, 12 Aberdeenshire, 731)). At Deerness there may as well have been a change in the pilgrims' attitude; throwing stones, or water, behind the back was a method of getting rid of some evil, transferring it as it were to the stone (McPherson 1929, 224–5), whereas leaving money might either have been a thank-offering, or almost to reinforce the prayer for relief or positive good, which might have been given to a priest.

IRON

A full catalogue of this material is given in microfiche (4: B14, C1–3, C13–14). Several amorphous lumps with solid cores are now unrecognizable as artefacts through corrosion. From a total of 31 identifiable iron fragments recovered, 23 rivet fragments and eight nails have been distinguished, as follows:

| <i>Phase</i> | <i>No</i> | <i>Layer</i> | <i>RF No</i> |
|-------------------|-----------|------------------|--------------------|
| Rivets | | | |
| Chapel: Phase B2 | 1 frag | Layer BY | 137 |
| Phase D2 | 1 frag | Layer AL | 36 |
| Enclosure: | | | |
| Phase A | 20 frags | Layer DQ (Grave) | 126–9, 155–61, 147 |
| Phase C2 | 1 frag | Layer BD | 99 |
| Nails | | | |
| Chapel: Phase C4 | 1 frag | Layer BN | 74 |
| Phase D1 | 1 frag | Layer AR | 141 |
| Phase D3 | 1 frag | Layer AK | 34 |
| Enclosure: | | | |
| Phase A | 1 frag | Layer DQ (Grave) | 129 |
| Phase C2 | 4 frags | Layer BA | 47 |
| | | Layer BD | 113, 114, 118. |

From this breakdown of the material, the disproportionate concentration of rivets (20 fragments, possibly representing as many as 12 rivets) along with one nail, from DQ, Phase A2, a child's grave, is particularly interesting and important. There does not appear to be any difference between the types represented in this grave and those from the rest of the site, ie all have roughly circular shanks and, where identifiable, square rivet plates. One rivet-head (156) could be distinguished in this group. The existing maximum length of 156, 24 mm, is significant in view of the fact that the wooden remains in the grave, representing a coffin, gave a maximum width of each side between 30 and 40 mm. 156 must therefore represent almost the complete original length. In the examples which show both shank and plate relationships, 128 and 36 have the shank at an angle of approximately 30° to the plate, whereas the others are straight. On the six plates represented, there are no traces at all of the shanks, but, from the x-rays, it is not possible to tell if the voids indicate a complete absence of the shanks, or total erosion of the element. Since

as many as 12 rivets have been recovered from this deposit, it probably indicates that they must represent a large percentage of those originally present. Therefore, the slight variations present in the types remaining should represent variations originally present. RFs 155 and 158 may, for instance, possibly be of a slightly different type, having larger plates in association with the shanks. The recovery of a single nail from this context may possibly indicate that it was associated with the fastening-down of the coffin lid. The alternative is that there were more which have corroded: the other Phase A grave, GQ, lacked both body and rivets.

The finds from Phase C2 of the churchyard, a rectangular rivet plate (99), a probable nail head (118) and other fragments (47, 113, 114) may have been associated with structural remains, stray drift-wood timbers, or, although there were no other traces of burials, they might be vestiges of cleared graves.

Of the five identifiable fragments recovered from the chapel itself, the two rivets (RFs 137, Phase B2 & 36, Phase D2) must be suggested as structural elements. There was no trace of burial in coffins (although isolated fragments of human bone were noted) within the confines of the chapel walls at any stage. Rivet 137 had a round flat head with a square plate, whereas 36 is different with a fine diamond-shaped plate. The nails also are of differing types, presumably serving different functions. It is possible that the larger one (34, Phase D3) was associated with the roof of the building, although its full length is not present. A similar example is illustrated from Jarrow (Cramp 1969, 56, fig 24, no 2a & b). It is particularly interesting in the light of the recovery of a stone roofing tile (RF 153) from Phases D3–4. The other nail fragments may have been of lesser structural significance.

The types represented have many parallels from other sites, sometimes in more identifiable contexts. The fragments from the child's grave in Phase A2 have strong similarities with the ones from Jarrow Grave 155 (ACQ 1970) in a Saxon context (Cramp, pers comm), although they are rather more uniform in type than the deposit at Deerness. It is possible that this coffin was not 'custom made' but created out of the items most readily to hand. The fact that the rivets do not differ markedly from the few other examples on the site could be taken to reinforce Hope-Taylor's statement that maritime influence on everyday carpentry could be seen at Yeaveering (Hope-Taylor 1977, 192). The people at Deerness used metal work, iron nails and rivets common both to the sea and to joinery, including coffins and chapels. The remaining evidence could easily support this kind of interpretation. One of the particularly diagnostic forms of rivet-plate represented is the diamond-shaped one (36). This type has wide parallels, ranging from Jarrow (ACQ 1970) in a grave context, to Yeaveering in a structural context (Hope-Taylor 1977, 192, fig 91, nos 10, 15 & 20), and at Sutton Hoo (Phillips 1940, fig 14; Bruce-Mitford 1975, 362, nos A–C) and Dorestad, Hoogstraat 1 (Harbour) (Van Es & Verwers 1980, 176, fig 126, nos 3, 4 & 6) in a maritime context. Also such rivets occur from a possible boat grave at Gill, Westray (Grieg 1940, 99, fig 55); an example from Birsay (BY78FE55) is from a midden context and cannot be placed in one of these categories. The type was also a common form in Scandinavia; in Trondheim clench-bolts with diamond-shaped plates were the most common metal object found during excavation (Long 1975, 22). In repairing street surfaces in Trondheim, sections of old boats, containing the rivets, had been found.

The other types of rivet plate can be paralleled at Skuldelev, Denmark. Here, ship remains in the Roskilde fjord showed impressions in the wood of square plates, which appeared to have been cut from c 2 cm broad, flat bars; and circular, flat-headed spikes used for attachment (Olsen & Crumlin-Pedersen 1967). More irregular forms of rivet plate were seen in the 10th-century Graveney boat, of an irregular quadrilateral form (Fenwick 1978, 224).

The different types of nails, (with rivets being termed clench nails), are outlined by Hope-Taylor 1977, 190–3) as small headed nails, not represented at Deerness; large flat heads, at Deerness only really distinguishable in 155 and 158 (although it is difficult to tell if the heads are plates or heads); and clench nails with small heads used in plank work, more commonly found at Deerness. The preponderance of nails present for plank work would be expected in view of the fact that most of the material came from a single deposit, a wooden coffin, presumably formed of planks. The types with the larger head/plate, 155 and 158, may have been associated with the lid of the coffin, as Hope-Taylor specifically notes that examples of this type were found in associations with a door (1977, 193).

It is rather difficult to make categorical statements about the period of time represented by these fragments of iron. They are not good chronological indicators, since they are functional. The examples quoted come from the Saxon and Viking milieu; however, the same types can be found in the later medieval period (see, for example, Lochmaben Castle, Dumfries: MacDonald & Laing 1975, pl 55, no 23). Their significance lies in their presence; representing a coffin in Phase 1, possibly one of two such burials recovered, and in later phases, possible structural evidence for timber elements or phases.

BONE (fiche 4: C3–4)

with D James Rackham

A worked bone fragment from a large animal (illus 25) *142 Phase C1*

This forms part of an undiagnostic rough point. It could originally have been part of a roughly made pin, such as illustrated by Hamilton from Jarlshof (1956, 126, fig 59), but it is not possible to be more precise than this.

The other pieces (RF 125, Phase C1 & RF 78, Phase C2) are from large animal long bones, 125 is rodent-gnawed and not artefactual. 78 has a flat edge that conceivably is the result of working, but again not in a diagnostic form. The overall number of bone artefacts is few. This could be due either to the effects of relatively acidic soils or their initial absence on the site. As many bone artefacts are personal ornaments, or from a female assemblage, this would at least be consistent with the function as an ecclesiastical site. Otherwise, on a site with more than one phase, more bone artefacts would have been expected.

EXCAVATIONS 1975–7: ENVIRONMENTAL STUDIES

SAMPLES (see fiche 4: D1–3)

As the excavations concerned only the area of the chapel and surrounding enclosure, and not the adjacent settlement, it was not considered that a comprehensive sampling programme was appropriate. However, samples were taken of particular layers which appeared to be promising for the recovery of biological data. Unfortunately, many of the samples were unsuitable. Three only of the environmental samples were fully processed: calcined bone and charcoal were recovered. No radiocarbon samples taken produced enough suitable carbonized material for dating purposes, but three did supply further charcoal and calcined bone for environmental analysis (CG, FA & RB: Enclosure Phase B1–2). The remaining biological material was picked out from visual inspection of soil.

HUMAN BONE

(See report by Dr Simon W Hillson, with contribution from Dr Dorothy A Lunt, fiche 4: D3–E1.)

Two teeth only were recovered from the Chapel area (Phase B2: BY), and were with a quantity of animal bone. They seem to be from an individual aged 45 years or more, and cannot be related to the material from any of the graves excavated.

From the Enclosure, two small clay-plugged graves are associated with Phase A1–2 (DQ, CQ, above). From DQ, small fragments of the skull together with the developing crowns of 17 teeth survived. As adult bone was not preserved well at the site, it is not surprising that the rest of the skeleton did not survive as well as the teeth. This seems to represent a juvenile individual aged about five months. Fragments of a long bone survived from GQ; it is unclear whether they are human remains.

From Phase C2 of the Enclosure came material from two graves with cover-slabs (BS and GD: see above). Most of BS was recovered, although it was in a poor condition. Male sex is suggested by the robust innominate bones and the relatively large acetabulum; an age between 24 and 39 is suggested by the pubic symphysis and between 25 and 35 from the molar attrition. Some pathological conditions were noted: on the maxillae, dental calculus and enamel hypoplasia, together with mild periodontal disease. A possible Schmorl's node on the 10th thoracic vertebra, due to prolapse of the intervertebral disc, and some evidence of articular surface degeneration in the lower thoracic region were evident from examination of the vertebral column. GD (with some fragments in GC above) consisted largely of the skull with teeth; the remaining bones were too broken and incomplete for identification. There is some difficulty with estimating the age of the individual but it is clearly a juvenile either 6½–7½ or 8–9 years old. *Cribra orbitalia* is suggested by the slightly porotic nature of the roofs of the orbits of the skull, but the cause of the condition

is not hazarded in the present state of knowledge. Slight enamel hypoplasia, and moderate dental calculus, are noted, but not periodontal disease.

Finally, very fragmentary remains in a small grave in Phase C2 of the Enclosure (GP, to the east of the chapel: above), were examined. It appears that this individual died at birth or just afterwards. One bone found in a second similar small grave (GO: see above), was animal, being an astragalus from a sheep; no human remains survived.

AN ANALYSIS OF THE ANIMAL REMAINS

D James Rackham

Individual identifications have been placed in the archive. Detailed tables by species and episode are in the microfiche section (4: E1-6). The collection comprises bones of fish, bird and mammal and the shells of molluscs and crustaceans. The majority of these were handpicked during trowelling and, apart from an exceptional collection of over 1000 burnt bone fragments from a sample of layer CG (Enclosure Phase B1-2), very little bone or shell was found in the soil samples taken during the excavations.

Because of the limited excavation area, there is inevitably an artifice in the collection. Theoretically, little occupational or midden debris would occur within the bounds of the enclosure wall owing solely to the use of a chapel. On the other hand, it may have been used as a receptacle for a settlement existing after the chapel went out of use. Also, a chapel which has up until recent times been a place of pilgrimage is likely to accumulate debris throughout its history, possibly well after the settlement on the Brough had become deserted. The collection discussed below is treated in isolation since contemporaneity between chapel and settlement cannot be established and the bone may bear no relation to the economy or subsistence activities of the settlement.

Much of the bone in the early layers is burnt, but although PVA was used to aid lifting some of the bones, both human and animal, survived in fairly good condition. The burnt bone is significant, thus, not as a survival factor, but in coinciding with areas of burning. The presence of shells throughout all the phases suggests that the soil was not acidic enough to destroy bone. It is, therefore, assumed that the bones recovered are a true reflection of the bones deposited on the excavated part of the Brough and few, if any, have been lost through corrosion. The variability in bone fragment numbers and identified remains throughout the site both spatially and chronologically can thus be considered.

Despite the recovery of over 2800 bones and shells, fragmentation of the material and pre- or post-depositional burning have rendered most of the material unidentifiable. Only 17% of the remains can be identified to species. In addition, abundant rabbit bones (up to 40%) testify to heavy disturbance of the upper layers of the site; they are also intermittent in lower layers of the Enclosure area. The Orkney vole, *Microtus arvalis*, is potentially also an intrusive animal into the lower layers of the site.

The fragment counts of bones and shells in tables 6-8 in microfiche are presented within the spatial units of the Chapel Interior, the Enclosure area, and Outside the Enclosure. The markedly discontinuous distribution of both bones and identified species illustrated must bear some relationship to the activities on or associated with the site. Within the Chapel Interior, the only concentration of bone in the early period is within Phase B2. This is not unexpected since a chapel is unlikely to accumulate refuse during use. This phase is based on an interlude between the timber chapel and the stone chapel and may represent an occupation over the whole of the area within the excavation area before the Enclosure wall was built. In contrast to the chapel interior, the Enclosure has many more bones, although most of them are unidentifiable burnt pieces. The bone in the Enclosure is concentrated within the period in which the chapel was still in use, and is most frequent in Episodes 2 and 4, the former correlating with Episodes 2 or 3 of the chapel (Phase B1-2), and the latter with Episode 5 of the chapel (Phase C2), from which very little bone was found despite the excavation of two layers that covered most of the floor of the chapel.

The collection from the early 'use' phases of the site is very small in terms of identified bones although very small unidentifiable fragments are most common (see tables 6-8, fiche 4: E2-F2). The fish remains in these phases may well indicate food and the domestic animal finds from these layers are derived from animals showing the adult condition for most of the bone fragments found, in contrast to the ages indicated for the animals from the later phases. The majority of these bones are almost certainly debris from animals consumed for food. The sample is much too small to discuss the pastoral economy from which the animals derive but ox bones are most common overall in the early phases (tables 6-8).

Within the Enclosure area, the quantity of bone falls appreciably in phase D1 and subsequent phases. This absence of bone may well reflect a lack of adjacent occupation or refuse accumulation in the

area excavated. In contrast, the Chapel Interior accumulated more bone fragments during the decay and collapse phases (D1-4 & E) than most of the earlier phases. These levels represent 16th- and post 16th-century phases after the chapel had gone out of use (fiche 2: C6-D4) and the land bridge between the Brough and the Mainland had been lost (see above). However, if the accumulation during the later phases were to be attributed to adjacent occupation on the site, the absence of material from the Enclosure during the same phases would be enigmatic. A further characteristic of these phases of the Chapel is the relatively large numbers of fish and bird bones, animals that are almost unrepresented in the Enclosure and earlier phases of the Chapel.

We have no evidence for occupation of the Brough during these later phases although there is both documentary and archaeological evidence for the presence of pilgrims in the ruined chapel. That the bones within the chapel may represent the fare of these individuals is possible but another explanation for the remains is suggested by a more detailed analysis.

Among the bones of domestic animals from these phases sheep and pig predominate and there is no evidence of butchery except on a single ox bone; butchery evidence is, however, rare on the material as a whole. Many of the pig bones are natal and all are from very young and small animals, similarly most of the sheep bones are from juvenile animals. It is possible that many of the bones may result from animals that died naturally on the Brough where stock could be kept untended owing to the precipitous nature of the cliffs surrounding it, or had in fact ventured up to the path on the the stack. If this were so, then a high mortality of juveniles might be expected. Some of the pig bones are clearly from the same individual and their presence within the chapel, perhaps the only shelter from wind and rain on the Brough, could be predicted.

The identification of the bird remains has shown that there are no domestics in the collection and all the birds identified are still found on the Orkney Islands and some still occur regularly on the stack and probably nest there. Although most or all of these birds are edible their localized concentration in one of the only areas of shelter on the Brough is again suggestive of natural mortality and the presence of two or three bones probably from the same individual may lend some support. The absence of complete skeletons could possibly be attributed to the scavenging activities of the numerous gulls along the coast and the rodents on the stack.

The fish remains at first glance appear to be the result of human activity since the site is some 100 feet (30.48 m) above the sea level. However, Wheeler (pers comm) has noted the characteristically small size of the fish involved ranging up to a ling, *Molva molva*, of 50 cm, which is small for this species, and has suggested that this would imply fishing in shallow water probably with a small hook. Again individuals appear to be represented by more than one bone and a possible explanation is that all these fish could derive from the presence of birds of the species listed in tables 6-8. Gannets, which are common in the area today, will take all the fish species found (except perhaps the conger eel) and Nelson (1978) notes that these birds will take fish up to 50 cm long. The cormorant has been recorded taking fish up to and over 30 cm (Pearson 1968; Witherby *et al* 1943) in length and even a conger eel of over 80 cm although whether the specimens attributed to a conger of 1.2 m could have been taken by any bird seems unlikely, unless scavenged. This specimen may represent food debris or perhaps the bait of a line fisherman.

Whatever in fact the origins of the remains from these later phases are they seem unlikely to be pertinent to anybody's occupation of the site except perhaps the birds, sheep and pigs, but some may result from the presence of itinerant pilgrims, fishermen, shepherds or vagabonds.

WOOD AND CHARCOAL (see fiche 4: E7-8)

Alison M Donaldson

None of the posthole contents from the timber chapel revealed any sign of wood. In certain later levels, both inside and outside the chapel, carbonization by burning has preserved wood fragments as charcoal. Only one layer contained unaltered wood. This is an upper layer with mixed dating evidence (Enclosure Phase D3-4: AM) and the wood is probably from modern, imported pegs or similar material.

The charcoal is mostly from small (1-2 cm diameter) branches which are unlikely to have been used for a major constructional purpose. Possibly it represents the remains of firewood ashes which became incorporated into the various soil layers.

Apart from a few fragments of alder in a single sample (Enclosure Phase B1-2: EB) the charcoal is entirely of willow, probably a dwarf or shrub species. Willow pollen is present throughout the Flandrian in pollen diagrams from Orkney and is presumed to be native to the islands. Willows are a constituent of the

relict native woodland which remains in sheltered mountain gullies on Hoy (Prentice & Prentice 1975) and indeed would seem to have been present in the birch-dominated woodland growing during the Mid-Flandrian at nearby Deerness Bog (Donaldson *in* Morris, forthcoming). Moreover, as no other native species are present as charcoal it is most likely that the wood was gathered from a different type of vegetation. Today willow scrub or a dwarf willow community grows on dry grassland and heath which are not under agriculture, and also on sheltered cliffs and sand dunes.

It would seem from pollen diagrams that alder is not native to Orkney, so its presence probably represents the collection of driftwood from the shore. In contrast, neither pine nor oak, which probably have a similar origin, were present in the excavated material at Birsay. It may be that, because of coastal morphology and ocean currents, very little driftwood was available here.

It is likely that this charcoal represents the exploitation of a very local source of scrub willow with very little supplementation from driftwood.

RADIOCARBON DATING

with Michael J Stenhouse

Material from three contexts (BY, Chapel Phase B2; BS & CI, Enclosure Phases B1–2 & C2) was submitted to the Radiocarbon Dating Laboratory, Department of Chemistry, University of Glasgow. The results are as follows:

GU-1558, Mammal bone (ox, sheep, pig, identified D J Rackham) from DS76 CI: Enclosure Phase B1–2, 1220±90 bp $\delta^{13}\text{C}$: –20%.

GU-1559, Mammal bone (ox, sheep, pig, identified D J Rackham) from DS76 BY: Chapel Phase B2, Insufficient carbon for C14 analysis.

GU-1574, Bone (*Homo*) (identified D J Rackham and S W Hillson) from DS76 BS: Enclosure Phase C2 (slab-covered grave), 920±65 bp $\delta^{13}\text{C}$: –21.4%.

GU-1558 would thus correspond to ad 730±90 and GU-1574 ad 1030±65.

ANALYSIS

PREVIOUS INTERPRETATIONS

As can be seen from the published accounts and references to the Brough of Deerness, reproduced in the microfiche section of this report (2: C6–G8), consistently from the 16th century there have been references to a chapel here. From these earlier descriptions, especially that of Sir Henry Dryden who carried out the first systematic survey in 1866, one gets the impression that this identification has been done on the basis of the long-standing traditions associated with the site. Although Dryden noted an aumbry in the north wall, no other diagnostic internal features, even the altar subsequently found in excavation, were brought forward to support the identification. These traditions are referred to by every writer from the 16th to the 19th centuries, preceding Dryden's survey, and the name given to the place on Timothy Pont's 17th-century map, 'Bairnes of Brough', is identical to that in the 16th-century description by 'Jo Ben' (see fiche 2: C6–7). Despite speculation by Gunn (fiche 2: D11), Cromarty Smith (fiche 2: D13), Scott (fiche 2: E5) and Mooney (fiche 2: D14) about an origin from the Celtic language for the name of Deerness, which might link it with pagan religious practices associated with an oak grove (*daire*) or the priests (*diar*), it is this strange name for the Brough which is most illuminating. Hugh Marwick dismissed Mooney's further suggestion (fiche 2: E2) that 'bairnes' referred to 'children', being in some way transferred to the souls of monks, and offered a plausible alternative origin from O N *boen-hus* or 'prayer house' (fiche 2: E2 & F1).

It is possible that Gunn, Scott and Mooney were unconsciously attempting to relate this name to what were certainly rather strange activities at the site, described by 'Jo Ben' (fiche 2: C6–7). 'Here they do not worship God purely' was 'Jo Ben's' terse comment upon people who prayed there, but

also walked two or three times around the chapel, throwing stones and water (gathered from a 'fountain') behind their backs. To the learned divines of the 18th and 19th centuries such practices were 'superstitious', and the relics of 'a practice so repugnant to the spirit of rational religion' (Low fiche 2: C8, Barry, fiche 2: C9). However, there can be no doubt from the received accounts that it was to the chapel on the Brough of Deerness that the people, 'ignorant' though the Reverend George Low might have regarded them, came to on pilgrimage. At the end of the 17th century, the Rev James Wallace regarded this chapel and that on the Brough of Birsay as those most frequented by pilgrims (fiche 2: C7). The Rev George Low also connected its associated practices with St Tredwell's Chapel on Papa Westray, Cleat on Sanday and others. Pilgrimage is still recorded here in 1848 (fiche 2: C11: J M Neale).

The over-riding impression of the accounts is of a residual medievalism which had survived the advent of the Scottish Reformation, and which in times of misfortune led people to resort to such places to avert evil. As Low recounted in 1774, 'the force of superstition' was such that 'even old age scrambled its way thro' a road in many places not six inches broad, where certain death attended a slip' (fiche 2: C8). Despite the opposition of such representatives of 'rational religion', later accounts by Tudor (fiche 2: D6) and Craven (fiche 2: D7) make it clear that offerings still continued to be made in the 19th century by persons from the parish at the site. Mooney's addition (fiche 2: E3) that 'if the inhabitants who accompanied me left some offerings, they did not wish an outsider to see them doing so' implies that it would not have been altogether an improbable event even in the 20th century. Since then, writers have tended to push such practices backwards in time – John Gunn (fiche 2: E13) and Hugh Marwick (fiche 2: F2 & fiche 2: F3) placing them until the 18th century, and W Douglas Simpson pushing them back to the 17th century (fiche 2: F7). Archaeological evidence from the site relevant to this is discussed above.

Whatever the truth about the longevity of pilgrimage to, and votive offerings at, the site, the force of tradition, oral and written, is to emphasize the importance of the site as a religious focus. What is far less clear is people's perception of what the site had been in the past, and indeed the nature of the site is, in the absence of documentation from the medieval period, essentially an archaeological problem. There is a limit to inference from survey and this must be borne in mind when considering modern interpretations of the site as a 'monastery'. It is of no little interest that the first mention of it in a monastic context appears to be in 1879. Although Joseph Anderson did not specifically call the Brough of Deerness a 'monastery' in his description and discussion of the site (fiche 2: D2–7), he took it as one of three 'most typical' groups from Scotland – the others being Loch Columcille in Skye and Eileain na Naoimh, between Scarba and Mull. The statement, following the Deerness section (1881, 105), that the 'composite character of the groups may be taken as evidence that they are of the type of the ecclesiastical settlements of the monastic phase of the Celtic church', by analogy with Ireland, provides the key to subsequent discussion of the site. Before then, the only overall interpretation that had been offered was George Low's – and it must be remembered that his work was not published until 1879 (Anderson 1879). Low (fiche 2: C8) considered that the site was a 'rock fort' protected by 'a very strong stone wall' and that the 'many foundations of small huts', which he was the first to record, were for shelter for 'men and goods in time of publick disturbance'. Indeed it is clear that Low considered the chapel to be a late feature, and the site in general prehistoric.

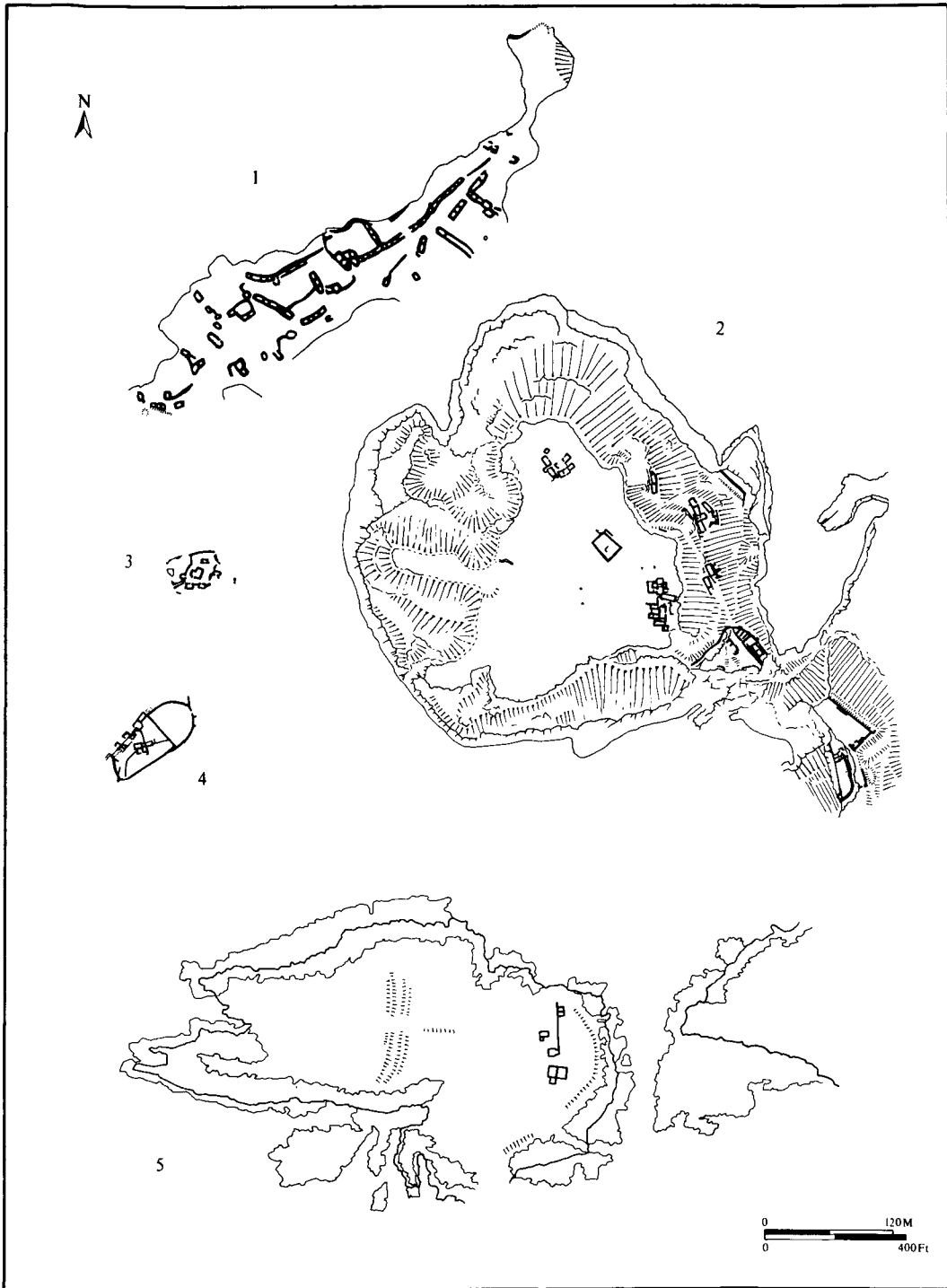
Although Sir Henry Dryden's survey (fiche 2: C9–11) in 1866 clearly showed the huts and the 'stones' on the landward side (illus 50), his only comment was that the huts 'were for the use of devotees who used this as a place of pilgrimage'. Although he noted the type of location as being particularly associated with churches and monastic establishments, he did not go as far as Anderson in assigning it such a function. The Rev J B Craven in 1901 was even more loath to follow such an interpretation (fiche 2: D7),

The writer well remembers the first day on which he visited it . . . The scene was gloomy and sad in the extreme. In the middle of the plateau stands a ruin, believed to have been a church, and around it are a series of stone heaps, supposed to have been the huts of a colony of early ecclesiastics . . . It required a great deal of faith to believe that what lay before us was any more than some sheep shelters.

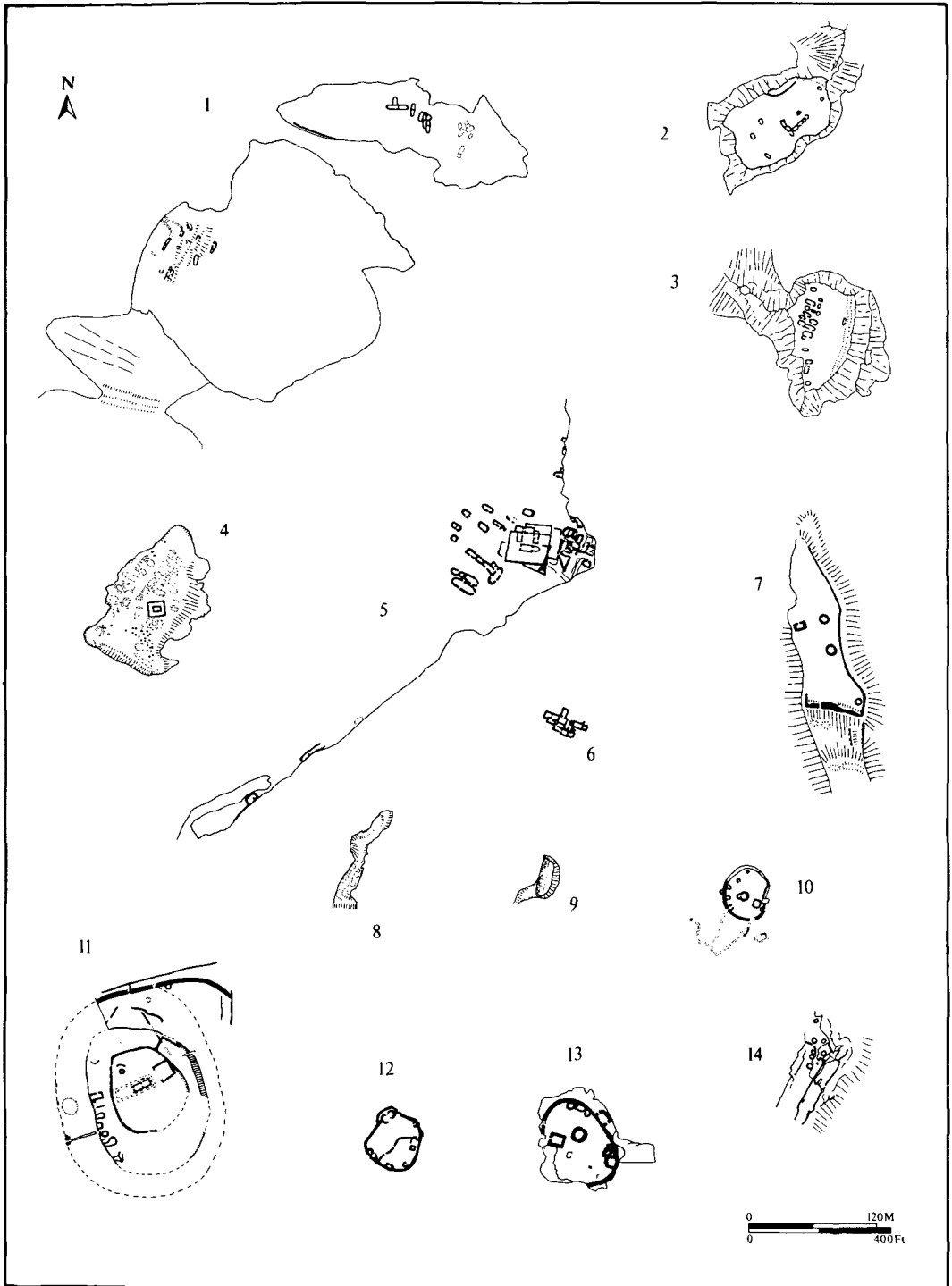
Despite Craven's scepticism about the customs associated with the site (which appeared to him to 'look more like pagan rites than any remains of Christian customs'), he conceded that 'the place was and is sacred ground'.

This 'sacred ground' was increasingly regarded as a monastic site in the 20th century. While Dietrichson and Meyer (fiche 2: D8) and J Storer Clouston (fiche 2: D12) still pointed to the traditions of pilgrimage, the huts were increasingly seen as 'beehive-shaped' and therefore logically to be associated with a monastic settlement on the Celtic pattern. To John Gunn, in 1909, the site was that of 'a Culdee monastery' (fiche 2: D11). By 1930, further writers – John Mooney (fiche 2: D14 & E2), Rev A B Scott (fiche 2: E4) and A W Brøgger (fiche 2: E8) had all interpreted it in this way, and they were followed in later years by John Gunn (fiche 2: E13), Mrs C L Curle (fiche 2: E14) and Dr Hugh Marwick (fiche 2: F1–2). However, it has to be noted that Joseph Anderson and A W Brøgger expressed reservations about necessarily dating the existing ruins to the pre-Norse period. The Royal Commissioners, basing their comments (fiche 2: E14) upon a survey of 1930, clearly were not prepared to commit themselves to either a full monastic interpretation or a pre-Norse dating for the church. The 'beehive cells' have assumed an increasing importance in the monastic interpretation. Of Dryden's 19 huts, 'mostly parallelograms' (fiche 2: C11), Dietrichson and Meyer noted some as being of 'the rounded off form', which were 'quite like the Irish beehive houses' (fiche 2: D10). These had become '18 beehive cells' to Smith in 1921 (fiche 2: D13) and Mooney in 1926 (fiche 2: E1), 'eighteen *casulae* of the "beehive" type' to Scott, also in 1926 (fiche 2: E4), although Brøgger in 1930 was more circumspect, with '18 small huts, of which some have beehive form' (fiche 2: E7). In the Royal Commission plan of 1930, not published until 1946, more buildings were distinguished than Dryden had planned, and as noted above, two groups, rectangular and circular, were distinguished. Only three of Dryden's buildings appear to overlap with the 'cluster of twenty-one circular huts', but it may be these that other writers were referring to as 'beehive cells'. However, although the group was generally unremarked upon before this time, it is a little difficult to believe, with Dr R G Lamb (fiche 2: F13 & F14) that *all* of the circular depressions (except for the well) are to be explained as shell-holes from the First World War period. The Commission clearly saw the round huts as earlier than the rectangular, which were 'mediaeval' in date (fiche 2: E14). Although, as Dr Raleigh Radford pointed out (fiche 2: F5) similar huts on, for example, St Helen's, Isles of Scilly (illus 26:3) were used in 'early Christian times', he appears to be reverting to George Low's interpretation of them in seeing them as 'survivals from an earlier age'. This is followed by Dr Euan MacKie (fiche 2: G5), but Dr L R Laing (fiche 2: G3–4) is the only modern writer to associate the circular huts with the putative monastery.

As for the rectangular buildings, it is clear that most writers have associated them with the standing stone chapel. The Royal Commission clearly saw both as medieval in date, and analogous to the remains on the Brough of Birsay, which they suggested were 'probably built for the use of a community of canons regular' (fiche 2: E14). However, subsequent writers have, almost universally, accepted the buildings as being associated with a monastic establishment. In the 1950s and 1960s, Marwick (fiche 2: F1, 3), Radford (fiche 2: F4, 5), Wainwright (fiche 2: F6), Simpson (fiche 2: F7) and Mooney (fiche 2: 8) all wrote about the buildings in those terms. Radford, particularly, saw here 'the layout of an extensive Celtic monastery', with a variety of building functions beyond that simply of providing cells for monks (fiche 2: F3, 5). In addition, Radford related the layout of the site to Tintagel in Cornwall (fiche 2: F3 & F5) and asserted that the site demonstrated 'the lack of an ordered



ILLUS 26 Comparative sites: 1, Gatholm, Pembs (after J L Davies *et al*); 2, Tintagel (after C A R Radford); 3, St Helen's, Isles of Scilly (after H E O'Neil); 4, Ynys Seiriol, Anglesey (after D B Hague); 5, Buryholm, Pembs (after D B Hague)



plan'. He further asserted that two of the buildings were overlain by the enclosure around the chapel, which he saw as a 'Norse church . . . of the late eleventh and twelfth centuries'. (However, elsewhere (fiche 2: F5) he says only one of the 'cells' was overlain.) He, therefore, saw the main settlement as pre-dating 850 AD.

Against this early dating for some of the buildings on this site, is now set Dr Raymond Lamb's hypothesis. From his examination of the site in the early 1970s comes the proposal that not only the chapel, but also the rectangular buildings should be dated to the Norse period (fiche 2: F10 & F14). Those with cross-walls were related to the site of Strandibrough, Fetlar (illus 27:1) and the other rectangular buildings were compared with those at Kame of Isbister, Northmavine (illus 27:3) and Birrier of West Sandwick, Yell (illus 27:2). Such buildings he sees as being of larger dimensions than would be consonant with an early date (fiche 2: G2; table 3). These 'longhouse-settlements' he now proposes as 'monastic houses of the 12th and 13th centuries' (fiche 2: F14), with the Brough of Deerness as a prime example. In addition he has postulated a possible relationship between it and the Stack of Moustag (fiche 2: G6-7). This latter could have been a possible dependent hermitage or, indeed conceivably – as might be suggested for Cleat and Strandibrough in Fetlar – a possible predecessor (1976, 151).

An element which has regularly attracted comment on this site is the bank and wall on the landward side. As noted above, Low related it to 'rock forts', and, most recently, this has had support from the Ordnance Surveyors in 1973, who saw it as being 'of typical [iron] A[ge] architecture indicating a defensive structure rather than a "vallum monasterii"' (fiche 2: F13). Dr Radford in particular, had suggested that the wall formed such a symbolic barrier for a monastery (fiche 2: F4) and this has been followed by Cant (fiche 2: F9) and Laing (fiche 2: G3). It is notable that the Commission did not note its entrance, although marking the line of the wall (illus 51), and that they, too, did not interpret the bank in such a way. Lamb, also, has supported an Iron-Age fort interpretation (fiche 2: F14) while admitting that there is no proof either way (fiche 2: F10). Professor Thomas (fiche 2: F8), by parallel with Tintagel, implies that reuse of such forts as monasteries was not unusual. Both Lamb (fiche 2: F10) and the Ordnance Survey (fiche 2: F14) suggest that the building in the south-west corner may be a gatehouse immediately behind the entrance.

As far as the central element in the site is concerned – chapel and enclosure – the pendulum has firmly swung to an interpretation as a building of the Norse period. In 1962 Dr Radford dated the chapel to the pre-Norse period, the main ground adduced was the observation that 'the masonry is of stones bedded in clay with the surface of the wall pointed in lime mortar'. This technique, Radford suggests, is paralleled at Whithorn, and St Ninian's Isle, Bute, and is likely to pre-date 700 on Irish analogies. However, at the same time Radford felt that the rectangular enclosure was Norse, as the rectilinear form was 'foreign to the earlier Celtic church' (fiche 2: F5). The assumption, therefore, must be that Radford was postulating an earlier, circular, enclosure to go with the chapel and the rectangular buildings – at least one of which, as noted above, he asserted was overlain by the rectangular enclosure. However, in 1961, Radford had described the enclosure as being 'of a little Norse church of a form typical of the eleventh and twelfth centuries' (fiche 2: F4). It is difficult to understand here the relationship of building technique to form, and how one may be used to assert a

ILLUS 27 Comparative sites: 1, Strandibrough, Fetlar, Shetland (after R G Lamb and OS); 2, Birrier of West Sandwick, Yell, Shetland (after OS); 3, Kame of Isbister, Northmavine, Shetland (after OS); 4, Brough of Deerness; 5, Brough of Birsay, Orkney; 6, Eynhallow, Orkney (after RCAMS); 7, Annait, Skye (after A C Thomas); 8, Brough, Dunnet, Caithness; 9, Aodann Mhor, Durness, Sutherland (after R G Lamb); 10, Sgòr Nam Ban Naomha, Canna (after J G Dunbar & I Fisher); 11, Nendrum (after H C Lawler); 12, Reask, Co Kerry (after T Fanning); 13, Church Island, Co Kerry (after M J O'Kelly); 14, Scéilg Mhíchíl (after L de Paor)

primacy of date over the other. It is not without significance that, although Anderson, Dietrichson and Meyer and Brøgger all emphasized the similarities to Irish or Celtic traditions in the building, the matter of masonry construction was raised as a serious problem in 1926 by John Mooney (fiche 2: E3). Radford's statements clearly are based on the Royal Commission description (fiche 2: E10), rather than any new analysis of the fabric. Dr Lamb discussed this question, observing that the walls appeared to be dry-built at Deerness, but also suggesting that the clay mortar may have crumbled away. He also observed that the point might be 'a relic of later medieval repairs'. Observations during excavation are discussed above. In all, Dr Lamb is in no doubt that the chapel dates from the Norse period (fiche 2: F11 & F14).

PHASING AND DATING

The phasing of the site has been presented above and needs no further elaboration here, except to observe that it refers only to the area excavated. It may very well be the case that phases such as the Intermediate phase B, or stages of collapse in Phase D, have altogether a greater significance in relation to other parts of the site. Certainly in the area outside the enclosure, to the east of the excavation, were features not easily related to the main sequences, such as the ditch in Episode 1 (fiche 3: G1-2), and the stone feature in Episode 5 (fiche 3:G6). The major focus of activity on this site may well have been, at times, elsewhere on the site, and there can be no certainty that the Intermediate Phase, when the chapel was out of use, was of a short duration.

Dating of the site rests upon a few direct pieces of information from different sources. In the first place, there is the coin evidence discussed by Robert Stevenson. The Anglo-Saxon coin (see above and fiche 4: B10-11) was minted during the reign of Eadgar (959-75), and relates to Phase B1. The amount of wear indicates that it could have been deposited some considerable period of time after that. The copper alloy votive coins (see above and fiche 4: B12-14) cover a range of dates. From Phase D3 in the Chapel Area come a group of eight 17th-century coins of James I, Charles I, Charles II and Louis XIII. From Phase D4 in the Chapel Area are four coins of Charles I and Charles II together with an Irish one of George III. In the Enclosure area, one coin of Charles II relates to Phases D3-4. Further coins of Charles I and Charles II were found before the excavation from a layer of tumble in the Chapel that is from Phase D4, together with coins of William II and George III. There are further records of coins of George II, George III and Queen Victoria from the site (fiche 2: G9), and from Phase E (rebuilding of east wall of chapel) came a 1971 new penny.

The pottery, although varied in fabric, remains, where distinguishable, largely unparalleled and presumably represents local work, as substantiated by the petrological examination. Fabric 3, from Phases C2, C3-4 and D1, would ostensibly seem to be more similar to prehistoric fabrics than any other, but it is suggested that it is a crude local ware rather than of early date, given the lack of other early archaeological evidence from the excavated site. Some of the sherds are more obviously later medieval, for example from Fabric 1. Being decorated and wheelthrown, this fabric, found in Phases C5 and D1, ought to be distinctive, but extensive searching through potentially comparable material has failed to produce anything directly similar. Fabric 2, from Phases C2 and D1, is coarse and undecorated, with considerable variation, including grass-tempering. It seems likely that the sherds are of medieval hand-made wares, but even the grass-tempered sub-group cannot be closely dated within this period. Fabric 4 is at present unparalleled.

The steatite sherds found in Phases B, C2 and C3-4 are taken to indicate a Scandinavian milieu and Norse date. Other finds, where identifiable, have a medieval context, although some finds, such as the stone pot-lid and pot-boiler, as with some of the ironwork, are types common to many periods and do not give close dates. All the clay-pipe fragments come from Phases D3-4, and range in date from late 17th century to late 19th century.

Finally, there are the radiocarbon determinations carried out on three samples from Phases B1–2 and C2 from the Enclosure area, and B2 from the Chapel. Only the Enclosure samples could be analysed; GU-1558 corresponds to ad 730±90 and GU-1574 to ad 1030±65.

In summary, then, we have:

| | | |
|-------------|-------------------------------------|-------------------------------|
| Phase B1 | Silver coin deposition | post ad 959±75 |
| Phase B1–2 | GU-1558 | ad 730±90 |
| Phases B1–2 | Steatite | probably Norse |
| Phase C2 | GU-1574 | ad 1030±65 |
| Phase C2 | Steatite | probably Norse |
| Phase C2 | Pottery fabric 2 | Medieval |
| Phase C2 | Pottery fabric 3 | ? Medieval |
| Phases C3–4 | Pottery fabric 3 | ? Medieval |
| Phases C3–4 | Steatite | probably Norse |
| Phase C5 | Pottery fabric 1 | probably Later Medieval |
| Phase D1 | Pottery fabric 1 | probably Later Medieval |
| Phase D1 | Pottery fabric 2 | Medieval |
| Phase D1 | Pottery fabric 3 | ? Medieval |
| Phase D3 | Copper alloy coins | 17th century |
| Phase D3–4 | Clay-pipe | late 17th–late 19th centuries |
| Phases D3–4 | Copper alloy coins | Charles II |
| Phase D4 | (excavated) Copper alloy coins | 17th–18th centuries |
| Phase D4 | (pre-excavation) Copper alloy coins | 17th–18th centuries |
| ?Phase D4/5 | Copper alloy coins (not examined) | 1740s–1860 |
| Phase E | Copper alloy coin | 1971 |

Working backwards through the site's history, this suggests a very recent date for Phase E, and a span of about two centuries for the collapse and tumble of Phases D3–4, with some hint that the lowest levels of the tumble were a stratified 17th-century deposit. The first deposits in Phase D would seem to be later medieval – although it must be remembered that the divide between medieval and post-medieval in Scotland is later than conventional historical divisions allow (Crawford, IA 1967). For the later three sub-groups of Phase C, Norse to later medieval dating is indicated, and the generally Norse to medieval dating of Phase C2 is supported by a single radiocarbon date on a grave. This radiocarbon date, at the two-sigma confidence level, has only the smallest of overlaps with the radiocarbon date from Phases B1–2, the Intermediate phase of the site's development as noted in the excavation area. However, the possibility that Phase B may cover a long time-period is raised by the divergence of date-bracket between the *terminus post quem* of the late 10th century for the coin from a feature in Phase B1 inside the Chapel, and the earlier radiocarbon date from Phase B outside the Chapel with only a 5% chance that the date is later than ad 910. It is most unfortunate that there was insufficient carbon from the sample submitted from Phase B2. Since the only major group of recorded finds comes from Grave DQ in Phase A, and these are undatable iron coffin fittings, these two somewhat divergent dates from Phase B provide a point of reference for the earlier phase. Without the radiocarbon date, there is little to prevent an argument being put forward that the site's history could be wholly encompassed within the Norse period. With the radiocarbon date, it would be likelier that the Timber Phase was pre-Norse. Given the evidence for an Intermediate Phase which includes deposition of refuse such as mammal bone, amongst other material, the balance of probability would seem to be with a foundation in the pre-Norse period. Although burnt spreads were excavated these overlie the Timber Phase structural evidence, and do not indicate destruction of the building by fire.

Disuse of the chapel could then, perhaps, be seen as during the period while the Norse were pagan, with re-foundation of the chapel once conversion to Christianity took place. The Stone Chapel is most unlikely to have been built before the 11th century and could have been built later.

FEATURES, STRUCTURES AND RECONSTRUCTIONS

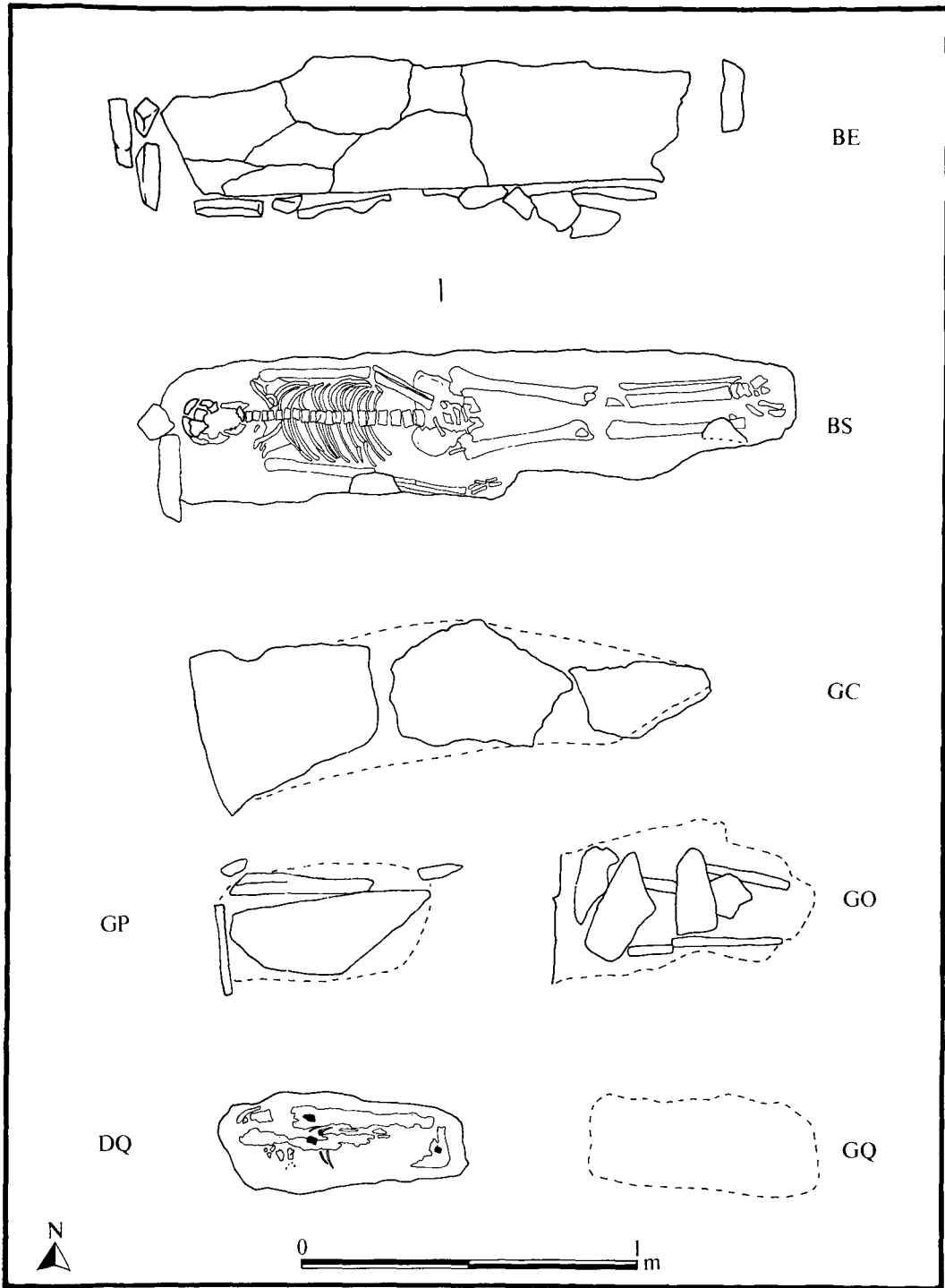
Perhaps the most surprising aspect of this excavation was the lack of any clear indications of a churchyard with regular burials. The sum total of possible burials within the area excavated was six, of which one was an adult, one a child, and four infants. Occasional pieces of human bone or teeth were found in other layers (eg Enclosure GC; Chapel BY: fiche 4: D4, D10), at least one of these cannot be attributed to the individuals represented in the graves (BY). However, there was no clear indication of the clearance of a churchyard's graves and, if the site as a whole is to be claimed as a monastery, the graveyard must have been elsewhere. It must be the conclusion of the present work that few burials can be associated with the use of the Chapel, and, indeed the impression is that, despite the fact that they are contemporary with the two phases of the Chapel's use, they represent an occasional, if not extraordinary, activity at the site. The absence of any cross-marked slabs is further support of this. Two, at least, of the graves were not particularly noticeable, being of a simple dug form and clay plug (DQ, GQ; see illus 28), but, although it might be argued that the infant graves in general could be explained as illicit burials, the two larger graves (BE/BS and GC/GD) had large stone slab coverings that must have been noticeable. Indeed one of the two slabbed infant graves (GR, GO) may have had a head stone.

Of the other features on the site beyond the Chapel, only the enclosure gullies and the eastern ditch are worthy of further note from the Timber Phase, and the stone wall around the enclosure from the later phases. It seems quite evident that the change from one to the other should be associated with the major change from timber to stone in the Chapel. That this is a change to be seen on early monastic sites excavated elsewhere in the British Isles, such as Church Island, Co Kerry (O'Kelly 1958) and Ardwall Isle, Kirkcudbright (Thomas 1967), is well-known, but cannot of itself on this site be taken to be indicative of either a monastic status for the site, or an early date.

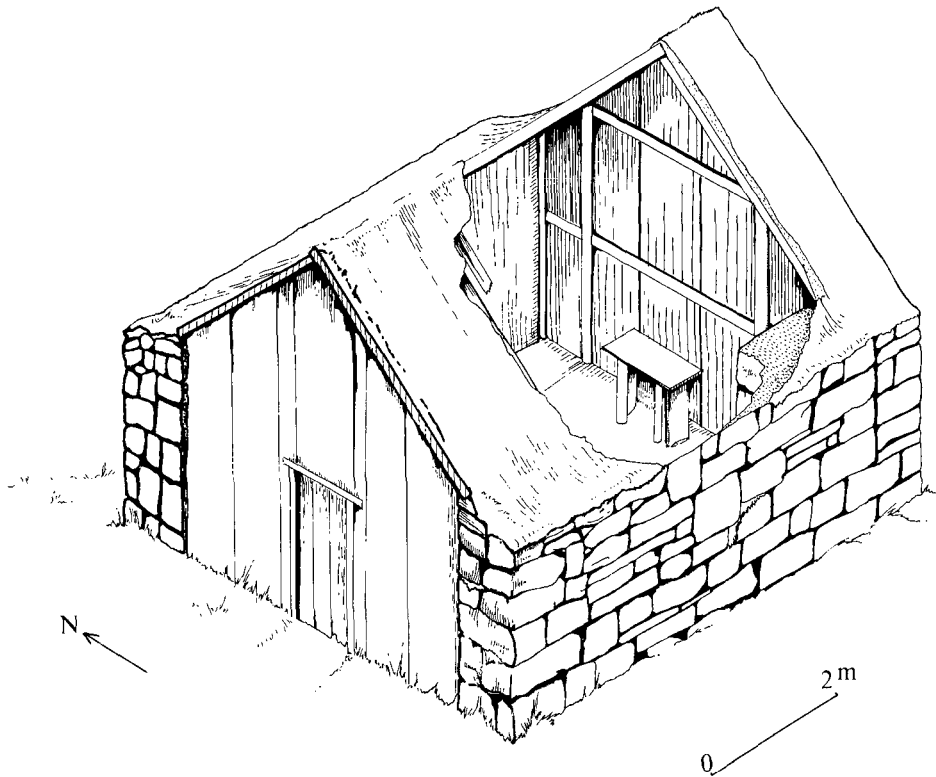
The Timber phase of the Chapel is, as explained above, taken to include the early stone wall and associated features that may have acted as a 'cladding' for the wooden walls. The features of the stone Chapel were mostly clear, with the exception of the putative north bench, and, even with the addition of the observations of Sir Henry Dryden in the 1860s (fiche 2: C9-14), it seems to have been a simple building.

The orientation of the Chapel has been considered by Mr Fred Bettess, who conducted the survey of the site. The bearing of the Chapel from the stone phase is calculated at $79^{\circ}31'$ east of north, ie slightly more than 10° north of a true east orientation. It is more problematical attempting to calculate the bearing of the Timber Phase Chapel, because of the fragmentary nature of the evidence. By taking a mean of the east wall, an orientation $76^{\circ}5'$ east of north is obtained, and the impression of the timber north wall would not be inconsistent with this. Similarly, the remnants of the robbed north wall stone 'cladding' would not be greatly at variance with this. The south 'cladding' wall is, however, a more difficult proposition. As can be seen from the plan (illus 8), there is no consistent outer face to the wall, and the impressions from robbed stones to the west are considerably more east or north than most of the surviving wall. A mean of the outer face of the east part of the surviving stretch of the walling is $71^{\circ}24'$, but a 'best fit' for all the features would be in the range 74° - 76° east of north, ie close to the orientation proposed above for the timber elements. Without other surviving stretches of associated walling, it is not possible to be conclusive.

The reconstruction of the timber Chapel (illus 29) is based on a number of postholes, grooves and other marks found in the natural clay surface AQ/CF while excavating within the stone Chapel,



ILLUS 28 Comparative plans of graves



ILLUS 29 Reconstruction of timber phase Chapel

and just outside its west wall (fiche 3: A5–10). Associated with this timber Chapel were the stone cladding found below the south wall of the stone Chapel, and traces of a robbed stone cladding by the north stone wall (fiche 3: D8–13).

The postholes FU, HB, HC, and a slight connecting groove found against the external face of the south section of the west wall, were taken as the west end of the timber chapel, although it is conceivable that groove FO may have marked a timber west wall. Alternatively FO may have formed part of an internal feature. At the east end of the stone chapel was the groove of what was termed a wooden 'screen' (EC). This was taken as the clearest demarcation of a wooden east end to the structure. A number of postholes appear to have been associated with it. The slight breaks in the indentation of the 'screen' suggest that the east end was of vertical plank construction, supported by posts, perhaps with some cross-bracing. The cross-bracing could have been on either of the faces of the eastern wooden wall. On the north side of the stone chapel, excavation of the clay surface (AQ/CF) revealed groove FI, which may represent a plank-built north wall. The presence of a later stone bench, which was not removed during excavation, may well have hidden evidence of a plank-built south wall.

All this evidence suggests a plank-built chapel, clearly clad on the north and south sides by drystone walling. Only one course of stonework was found on the south side, but to be of any use, it must have been higher, to support and protect the timber walls. In the reconstruction it has been taken up to the eaves. There was, however, no trace of stonework at the west and east, although behind the 'screen' there were a number of irregular marks in the clay surface (DX, EE, GB, GI, GK, GL) which may indicate the presence of an east wall. The presence of stones of the south 'cladding'

extending beyond the 'screen' would seem to confirm the presence of a stone east end, and there appears to be a return in the robbing of the north cladding. This east cladding may have covered only the lower part of the timber wall, as is known from later Icelandic churches with cladding, such as *Arboer*, on *Silfrastaðr* farm in *Skagafjörður* (Reykjavik Museum 1981, 1). The west end of the chapel would appear to have been entirely of wood, like the Norse churches at *Undir Höfða*, *Sandnes* and *Herjolfsness* in Greenland (Rousell 1941, 109–11), *Sand* in the Faroes (Krogh 1975), and the later churches at *Vidimyr* (Rousell 1941, 116), *Núpssta ur/Lómagnúspur*, and *Gröf* (Krogh 1967, 26–7) in Iceland. A central door has been given to the west end.

There is no evidence for roof material. This may have been inorganic, but later removed, perhaps for reuse; or an organic cover which has not survived. In the re-construction an organic cover was favoured, and turf was the first choice, although some form of thatch may have been used. The turf could have been laid over closely set rafters, or rafters with latts, and extended down over the stone cladding (Reykjavik Museum 1982). Cross beams may have been laid across the chapel, resting on the north and stone 'cladding', to support the trusses.

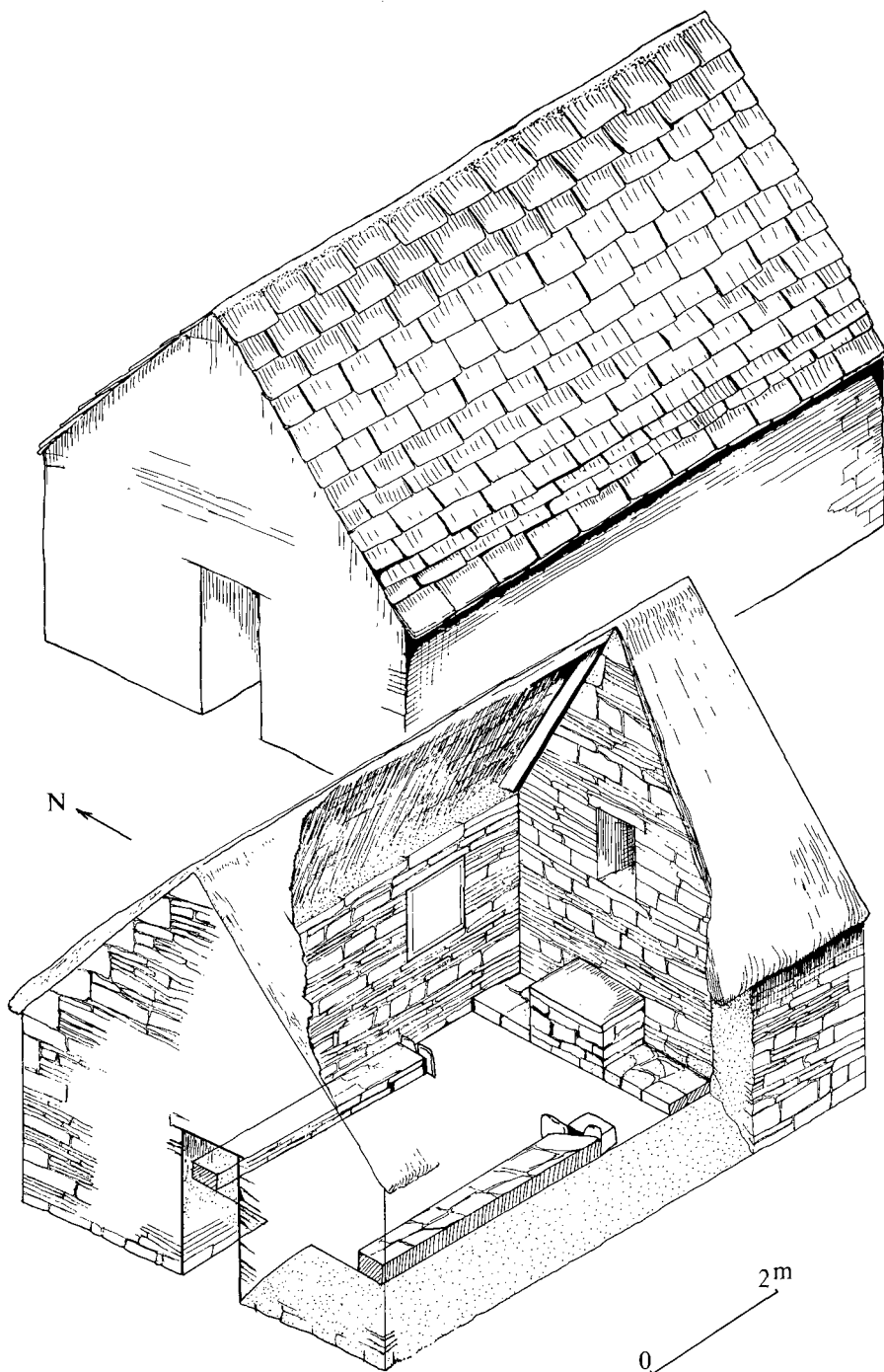
Internally there is no clear evidence for a hung-floor, and the natural clay surface presumably served. A number of holes were found within the chapel area, but it is not clear what function they served. Only at the east end are there holes and slots for a timber altar, set up in the centre, close to the plank 'screen'. This was presumably about 1 m in height, and has been reconstructed with a wooden *mensa*, somewhat larger than its stand (also see *illus 9*). The grooves on the north and south sides of the altar appear to have held plank uprights, while holes at the west and east ends clearly held posts; indicating a more open front to the altar. No embellishment or decoration of the chapel can be put forward in this reconstruction, but it should be noted that planks similar to those postulated for the east wall here have survived in Iceland with religious scenes, for instance at *Flatagunga* (*Eldjarn* 1953).

Although in a ruinous condition, enough remained of the stone chapel to produce a more reliable drawing (*illus 30*). Excavation within the stone church also revealed the stone fittings: altar, settings on either side of the altar, a south bench, and traces of a north bench (*fiche 3: B4–C5*). A large stone slab from phases D1–2 may be a damaged *mensa*, and in the reconstruction drawing, this has been returned to the altar. Upright stones at the end of the south bench may represent a dividing line, separating the worshippers from the priest at the altar. A stone block close to the uprights has also been shown on the drawing, and may represent a priest's or attendant's seat. The drawings of Sir Henry Dryden (*illus 65* and *66*) provide the details of the location, shape and dimensions of other internal features now lost, particularly the aumbry in the north wall, and the east window; as well as giving some indication of the possible height of the chapel. As noted above, at various times the floor was of pebbles, slabs and mortar.

An attempt has also been made in the reconstruction drawing to pick out the banding in the walls, but when it comes to the roof, there is far less evidence. The upper version of the stone Chapel shows it with a roof cover of stone slabs. This is, unfortunately, based on only one fragment of a slab (*RF 153*), and there was no information whatsoever on the ridge cover. Nails, which may have been structural, were found in both Chapel and Enclosure. Alternatively, the lower drawing shows the Chapel with an organic roof cover, either turf or thatch, which would not have survived. Either form of roof would have required latts or purlins to support the cover.

THE SITE AS A WHOLE

Against the background of previous observations and discussion of the site as a whole have to be set the results of the survey undertaken in 1977. Clearly, excavation rather than survey is the crucial element in the understanding of the chapel and enclosure, and this forms a central part of this report.



ILLUS 30 Reconstruction of stone phase Chapel

However, the observation in survey that there did not appear to be any buildings to the south of the enclosure that were overlain by the stone wall, is clearly of significance. Although excavation did not take place outside this wall to the south, and although some building features lay close by, clearance of the wall did seem to support this observation. This clearly affects the sequence for the site that Radford postulated, for it was partly on the basis of superimposition that he suggested an early date for the rectangular buildings (fiche 2: F3). He also saw the 'lack of ordered plan' (fiche 2: F3) of the site as inviting comparisons with Tintagel (illus 26:2) and, by implication, Gateholm in Pembrokeshire (illus 26:1; see Davies *et al* 1971). Taken overall, the new plan arising from the 1977 survey suggests, on the contrary, that the plan has considerable elements of regularity, particularly to west and north of the chapel. It is quite clear what it is that invites Dr Lamb's (1974a) comparisons with the Shetland sites of Strandibrough, Birrier of West Sandwick, and especially Kame of Isbister. Although it must be accepted that the plan is quite probably a palimpsest, there is naturally a temptation to treat all above-ground traces of buildings as contemporary. However, as implied below (fiche 4: G12), around the chapel and enclosure there is less order, and the survey *may* have picked up an indication of a separate building phase. Possibly there is a discrete group here which may be chronologically separate from the others. Such an observation can only be verified by excavation, but it will be noted that rectangular buildings in close proximity to chapels or oratories are seen at other known monastic sites, such as the Welsh sites of Ynys Seiriol, Anglesey, and Burryholm, Pembrokeshire (illus 26: 4 & 5; see Hague 1974). Irish examples (although with very different overall layouts) include Nendrum, Co Down (illus 27:11; see Lawler 1925), and Scéilg Mhíchíl (illus 27:14; see de Paor 1955). Dr Lamb has already pointed out that there are oblong buildings to be found on Northern sites (1974a, 78), such as Corn Holm, Deerness, and Aodann Mhor, Durness, Sutherland (illus 27:9). He has also suggested that earlier sites can be distinguished from later by 'the repetition of a uniformly small building unit' (fiche 2: G1). A few of the Deerness examples are at the lower end of the range as he plotted it (table 3, based upon the buildings in the RCAMS survey plan), and the recent survey may have added one or two more (eg Nos 24a, 14, 9a). If this hypothesis is to be upheld, then it clearly needs testing by excavation: the Brough of Deerness would seem to offer an excellent opportunity to do so. It is clearly of the most fundamental importance for the history and archaeology of the pre-Norse and Norse periods to clarify the building sequences at this site, which is accessible, in order to strengthen or modify Dr Lamb's hypothesis for the other, far more inaccessible sites. Given that excavation has demonstrated quite unquestionably that there were two major building phases of the chapel and enclosure, it would be perfectly possible for the present plan of the site to contain elements of both an earlier and a later plan of surrounding buildings.

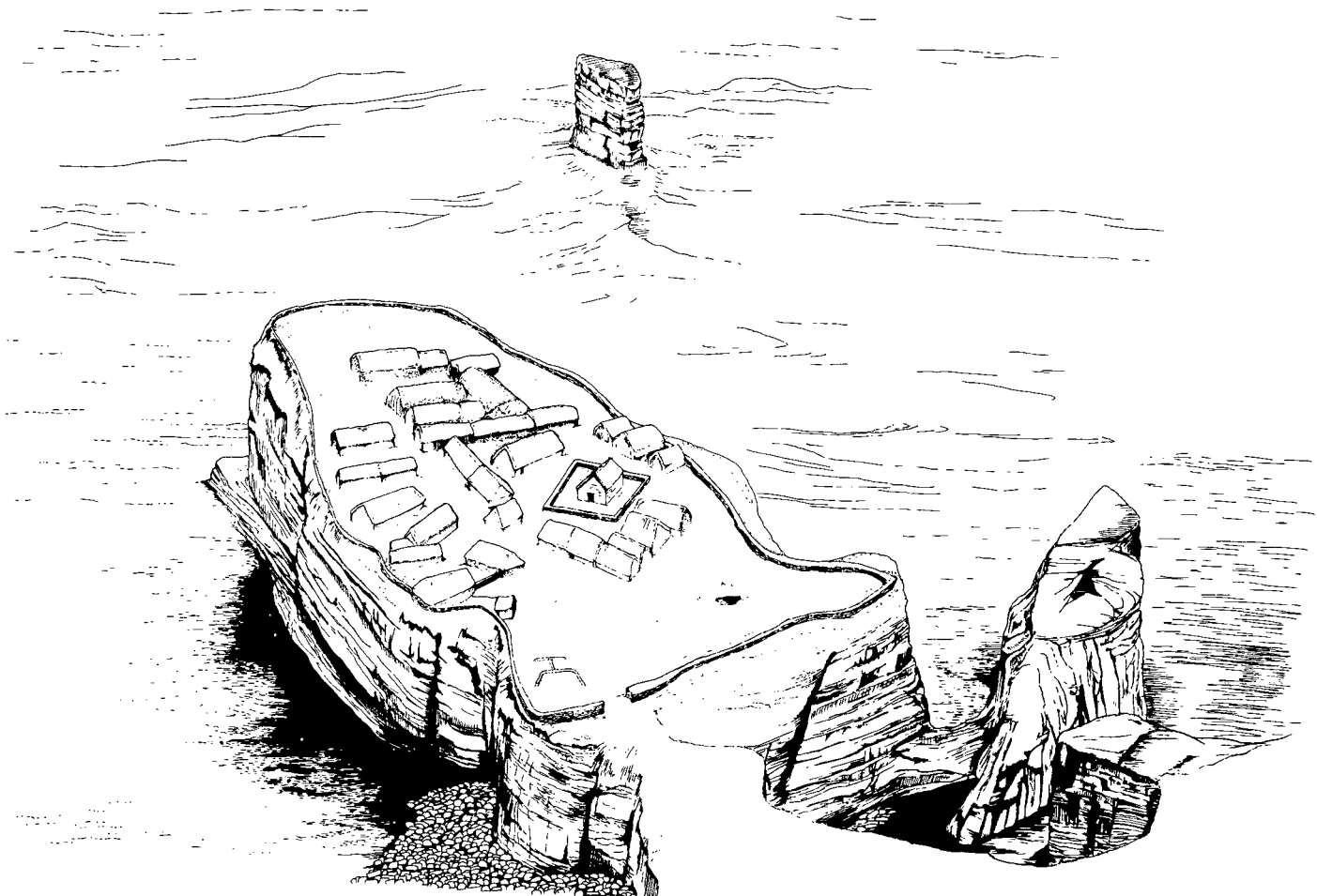
Dr Lamb has pointed to the similarity of complex building plans of this site and Strandibrough to those of Eynhallow (illus 27:6) and Brough of Birsay, also in Orkney. Recent survey of the latter site has revealed further buildings to the south-west of the main, well-known, Guardianship site, which are included on the figure reproduced here (illus 27:5). Dr Lamb compares the Brough of Birsay to Garðar in Greenland (fiche 2: G8), and other Norse farmsteads there, as well as Eynhallow. In terms of the comparisons with the Brough of Deerness, it is, therefore, doubly unfortunate that the final excavation report on work on buildings immediately around the chapel at Birsay has not yet appeared (see Radford 1959; Cruden 1958; Cruden 1965 for interim accounts). What may be added, however, as is evident from the site plan of Birsay, is that the chapel and enclosure there are surrounded by buildings to north and west of a rectangular form. These have been investigated in the past (see Radford 1959; Cruden 1958; Cruden 1965 for interim accounts), when they have been considered to be Viking and Norse farmsteads. Brief analysis of the associated finds (Curle 1982, 85–8) and recent excavations (summarized *in* Hunter & Morris 1981 and Hunter 1983) have not yet produced evidence that would be at variance with such an interpretation.

Inevitably, therefore, this comparison at Birsay must raise the possibility, tentatively raised in the Interim Survey report (Morris 1977, 70), that the buildings might be secular and domestic at Deerness. Clearly, as well as comparison of overall plan, other factors (such as situation and local context) have to be taken into account here, and it may be that such an explanation may not stand up to rigorous scrutiny. There can be little doubt that the natural setting at Deerness is more constrained than at Birsay, and that the surrounding area is less inviting for settlement. A more immediate comparison for Birsay Bay would be Sandside Bay at Skaill (see *illus 2 & 3*). However, on the site itself the rectangular buildings/longhouses, their relationship to chapel and enclosure, and even the entrance (duplicated in Birsay's so-called 'boat-slip', see Curle 1982, 12 & 54), do combine to suggest that it would not be altogether improbable for the site to have a similar sequence to Birsay. These observations must not be taken here to suggest that Lamb's hypothesis of a Norse monastery is seen as improbable, for he has brought forward a coherent corpus of material to stand alongside the evidence from Deerness. However, in part the interpretation of the other sites is dependent upon the assumption of the existence of a chapel or oratory at those sites similar to that at Deerness, where it is seen most clearly.

The further elements on the Brough of Deerness – the well, circular huts (if indeed, they are such), and bank and wall – are all elements of great importance to our understanding of the site as a whole. These elements could well be paralleled, as has been noted above, on early Christian monastic sites. 'Beehive cells' can be seen on Irish sites such as Nendrum (*illus 27:11*) and Sceilg Mhíchíl (*illus 27:14*) as well as western sites such as St Helen's, Isle of Scilly (*illus 26:3*). Found singly or in small numbers they are particularly associated with small settlements or hermitages (see Thomas 1971, 44–5). Church Island, Co Kerry (*illus 27:13*; see O'Kelly 1958; 1974) and Reask, Co Kerry (*illus 27:12*; Fanning, 1981) are almost type-sites, and related Scottish sites include Annait, Skye (*illus 27:7*) and Sgor nam Ban Naomha, Canna (*illus 19:10*). At these sites are also to be seen enclosures around the site as a whole (as opposed to an enclosure around the chapel). The circular enclosure is seen clearly at Nendrum, Church Island and Sgor nam Ban Naomha, but equally Annait demonstrates the feature of a *vallum monasterii* cutting off the neck of a promontory as is also seen at Tintagel (*illus 26:2*; see Burrow's reservations on the interpretation of this site expressed in Burrow 1974). The bank and wall at Deerness could very easily fit into such a context, on grounds of form, and as discussed above, has been taken as such by several writers. However, even if it did so, that would not necessarily solve the question of date, for, as Thomas pointed out (1971, 32–3) older sites were reused sometimes. An Iron-age date would be possible for both bank and wall, and circular huts. Equally, a well is to be seen on monastic sites – as at Sgor nam Ban Naomha – and is certainly found at the Brough of Birsay, with much associated material of the pre-Norse period (Curle 1982, 16, 18). However, on exposed sites such as the Brough of Deerness it could equally have been considered necessary at an earlier period, and have been reused later: its origin cannot be fixed without excavation.

Having presented a reconstruction of the stone Chapel, based upon excavated evidence, a more speculative attempt is made to present an overall reconstruction of the site (*illus 31*). In attempting to reconstruct the physical appearance of the Brough of Deerness at a stage when the stone chapel was in use, the overall survey plan has been taken and converted into an isometric projection, cliff faces added, and further details added from vertical and oblique air photographs and ground-based photographs, to produce the drawing.

Due to the fact that the 1975–77 excavations concentrated on the chapel and its enclosure, the layout of the surrounding plateau is highly subjective. All the rectangular buildings have been shown, although it cannot be proved from available evidence that they were all contemporary. The presence of a roadway between two rows of buildings, and leading off from the flat ground in the southern area



ILLUS 31 Reconstruction of site

of the plateau is, however, particularly noticeable. The chapel and enclosure, in addition, are shown surrounded by buildings. Access was provided by a possible pathway leading off from the roadway, and there is an indication of a more open area near the south-east corner of the enclosure. The depressions to the south-west of the chapel, variously interpreted as early cells or shell craters, have been excluded from the reconstruction because of their more enigmatic nature.

General access to the Brough from the mainland was clearly by scaling the cliff face along a narrow track in the 16th century. The presence of an opening in the western half of the wall and bank running along the south edge of the plateau, opposite a projecting neck of land, and the layout of the roadway on the west half of the plateau, suggest some connection at this point when the rectangular buildings were in use. What form this connection took is debatable. It may have been physically attached (as shown in the reconstruction), by a land bridge of unknown width, or there may have been a man-made bridge.

The opening in the wall and bank is clear, but what is uncertain is whether it formed a complete perimeter around the plateau, or was simply a wall intended to face the mainland. Erosion of the margins of the plateau would have removed any evidence of it, but in the south corner of the plateau there appeared to be the slight suggestion of a northward turn in the wall. Because of this, a full perimeter wall has been drawn, but the evidence is slight.

In all, although discussion of the plan of the site as perceived in the past and as now presented from the most recent survey, has raised a number of fascinating problems, no conclusive answers can be given. Hypotheses can only be formulated and presented for future testing by excavation. It is not possible, on the basis of survey alone, to assign a clear date or cultural context to the site as a whole – or its component parts – with any certainty. Iron-Age promontory fort, early Christian monastic site, Viking/Norse secular site with associated chapel, and Norse monastic settlement all remain possibilities, and indeed are not mutually exclusive. The excavations described above have provided a stratigraphical – and to a limited extent a chronological – sequence for one part of the site. It must, surely, be a conclusion from the survey, that more extensive excavations on other parts of the site are not only desirable, but essential for the understanding of this site and, by extension, many other sites in the region. Fundamental problems of interpretation have arisen.

CONCLUSIONS

As the excavations only examined a fraction of the whole site, of necessity the conclusions are more limited than might be hoped. Archaeological evidence cannot yet provide a clear context for the re-building of the chapel because of the lack of excavation on the surrounding buildings. The likeliest possibilities must be either the chapel for a Norse monastery or the private chapel of a secular lord, with the absence of an associated cemetery perhaps weakening the case a little for the former. The organization of the Church in Orkney and Shetland in the medieval period is one that is currently under review (see Cant 1972; 1975; forthcoming; Lowe forthcoming), and it would, therefore, be premature to discuss it here. However, there can be little doubt that the excavated evidence from the Brough of Deerness will require re-assessment as further work is carried out in both the historical and archaeological fields.

As for the significance of the site at a later date, it is clear that the archaeological investigation has given substance to traditions associated both with this site and with others for pilgrimage after the chapel had ceased to function. Robert Stevenson has discussed this in relation to the coin-hoard found here and it is conceivable that other objects found at the site from Phase D may also be explained in this manner. At the site of St Non's Chapel in Pembrokeshire objects such as pebbles and pins are specifically mentioned (RCHAMW 1925, 327: reference through the kind offices of Mr D

Austin), and it should be remembered that pebbles were noted at Deerness during the excavation and in J Ben's account (fiche 2: C6). At St Tredwell's on Papa Westray, heaps of stone and bread are mentioned. Archaeology and folklore are not often brought together, but in this case it can be argued that the archaeological evidence has supported the case for taking seriously traditions as handed down, whether orally or in a written form.

It is clear from early accounts of the Brough of Deerness (fiche 2: C7–8) that it was considered to be second only to the Brough of Birsay in popular traditions. These traditions have been substantiated in the excavations; but the basis of the traditions still remains for elucidation. While the survey of the site has indicated more clearly than before the layout of the site as a whole, and suggested in its palimpsest considerable complexity, the chronology is far from clear. The excavations, on the other hand, have, it is argued, given a clear chronological sequence (if difficult at particular points to tie down closely), but raised problems – in particular the lack of a graveyard of any size. It would be of great interest if the sequence from timber to stone building to be seen in the Chapel and Enclosure, could be examined elsewhere, for then both the overall site sequence would become clearer and hopefully related. This in turn would perhaps begin to answer questions about, for instance, the nature of the site as a whole in the Intermediate Phase when no chapel on the site excavated was in existence. Questions of interpretation of the site – whether monastery or not – and of dating – whether pre-Norse or Norse – should also be clarified. Remote and difficult of access as the site is, the overshadowing of the site as compared to other Orkney sites, and particularly the Brough of Birsay, is unfortunate.

The site has much yet to tell us, and is an unjustly neglected monument.

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REFERENCES

- A M B (E) 1975 *Principles of publication in rescue archaeology*. London.
- Acland, Rev C L 1922 Presidential Address, *St Paul's Ecclesiol Soc*, 2 (1922), 69–75.
- Alcock, L 1978 'Excavation and publication: some comments', *Proc Soc Antiq Scot*, 109 (1977–8), 1–6.
- Ambrosiani, B, Arrhenius, B, Danielsson, K, Kyhlberg, O & Werner, G 1973 *Birka Svarta Jordens Hamnområde. Arkeologisk Undersökning 1970–1971*. Stockholm. (=Riksantikvarieämbetet Rapport, C1.)
- Anderson, J 1873 Introduction to edition and translation of *The Orkneyinga Saga*, Edinburgh, reprinted 1973, ix–cxxxix.
- Anderson, J 1879 Introduction, in Low, Rev G, 1879, xiii–lxxiv.
- Anderson, J 1881 *Scotland in Early Christian Times*. Edinburgh.
- Anon 1979 'Viking objects found in Deerness', *The Orcadian*, 11 Oct, 1979.
- Bailey, P 1971 *Orkney*. Newton Abbot.
- Barry, Rev G 1805 *The History of the Orkney Islands*. . . . Edinburgh.
- Batey, Colleen E 1984a *A Survey of the Archaeological Monuments of the Caithness Coast: Dunnet Head – Ousdale, 1980–82*. Durham. (=Occas Pap Dept of Archaeol, Univ of Durham, 3.)
- Batey, Colleen E 1984b *Freswick Links, Caithness. A Re-appraisal of the Late Norse Site in its Context*, 2 vols, PhD thesis, Dept of Archaeol, Univ of Durham.
- Batey, Colleen E & Morris, C D 1983 'Part II: The Finds', in Hedges, J W 1983, 85–108.
- Batey, Colleen E, Cowie, T G & Welander, R D E forthcoming 'The Viking Age Grave and its finds from Traigh Na Berie, Kneep, Valtos, Isle of Lewis', *Proc Soc Antiq Scot*, 117.
- Batey, Colleen E, Morris, C D & Rackham, D J forthcoming 'Freswick Castle, Caithness: report on rescue excavations carried out in 1979,' *Glasgow Archaeol J*, forthcoming.
- Bekker-Nielsen, H, Foote, P & Olsen, O (eds) 1981 *Proceedings of the Eighth Viking Congress, Arhus 1977*. Odense.
- Birks, H J B 1977 'The Flandrian forest history of Scotland: a preliminary synthesis', in Shotton, F W (ed) 1977, 119–135.
- Black, G F 1903 *County Folk-lore III. Printed Extracts No 5. Orkney and Shetland Islands*. London.
- Blaeu, G & J 1654 *Theatrum Orbis Terrarum, sive Atlas Novus*, vol 5. Amsterdam.
- Brand, Rev J 1703 *A New Description of Orkney, Zetland and Caithness*. Edinburgh.
- Brøgger, A W 1929 *Ancient Emigrants. A History of the Norse Settlements of Scotland*. Oxford.
- Brøgger, A W 1930 *Den Norske Bøsetningen på Shetland-Orknøylene. Studier og Resultater*, Oslo.
- Brothwell, D R 1972 *Digging up Bones. The Excavation, Treatment and Study of Human Skeletal Remains*, 2 ed. London.

- Brothwell, D R 1977 'On a mycoform stone structure in Orkney and its relevance to possible further interpretations of so-called souterrains', *Bull Inst Archaeol Univ Lond*, 14 (1977), 179–89.
- Bruce-Mitford, R 1975 *The Sutton Hoo Ship Burial*, Vol 1, *Excavations, Background, the Ship, Dating and Inventory*, London.
- Burrow, I C G 1974 'Tintagel – Some Problems', *Scot Archaeol Forum*, 5 (1974), 99–103.
- Callander, J G 1933 'The pottery found at Blowes and the Bronze Age pottery of Orkney and Shetland', *Proc Soc Antiq Scot*, 67 (1932–3), 345–53.
- Cant, R G 1972 'The Church in Orkney and Shetland and its relations with Norway and Scotland in the Middle Ages', *Northern Scotland*, 1 (1972), 1–18.
- Cant, R G 1975 *The Medieval Churches and Chapels of Shetland*. Lerwick.
- Cant, R G 'Settlement, Society and Church Organisation in the Northern Isles', in Fenton & Palsson, forthcoming.
- Cash, C G 1901 'The First Topographical Survey of Scotland', *Scot Geog Mag*, 17 (1901), 399–414.
- Clayton, J, Bruce, J G & Smith, C Roach 1880 'Continuation of Description of, and Remarks on, The Temple of Coventina and its Contents', *Archaeol Aeliana*, n ser, 8 (1880), 20–49.
- Clouston, J S 1918 'The Old Chapels of Orkney', *Scot Hist Rev*, 15 (1918), 89–105.
- Clouston, J S 1927 *The Orkney Parishes: Containing the Statistical Account of Orkney, 1795–1798 . . . by Sir John Sinclair, Bart, together with a General Introduction and Notice of each Parish*. Kirkwall.
- Cramp, Rosemary J 1969 'Excavations at the Saxon Monastic Sites of Wearmouth and Jarrow, co Durham; an Interim Report', *Medieval Archaeol*, 13 (1969), 21–66.
- Craven, J B 1901 *History of the Church in Orkney from the Introduction of Christianity to 1558*. Kirkwall.
- Crawford, I A 1967 'The Divide between Medieval and Post-Medieval in Scotland', *Post-Medieval Archaeol*, 1 (1967), 84–9.
- Crowfoot, E G 1956 'Appendix 1. Objects found in cremation hearth. Mound 11. Wire Embroidery', in Posnansky, M 1956, 52–3.
- Cruden, S H 1956 'Scottish Medieval Pottery', *Proc Soc Antiq Scot*, 89 (1955–6), 67–82.
- Cruden, S H 1958 'Earl Thorfinn the Mighty and the Brough of Birsay', in Eldjárn, K (ed) 1958, 156–62.
- Cruden, S H 1960 'Skaill, Deerness, Orkney', *Discovery Excav Scot 1960*, 45.
- Cruden, S H 1965 'Excavations at Birsay, Orkney', in Small, A (ed) 1965, 22–31.
- Curle, A O 1939 'A Viking Settlement at Freswick, Caithness. Report on Excavations carried out in 1937 and 1938', *Proc Soc Antiq Scot*, 73 (1938–9), 71–110.
- Curle, Cecil L 1940 'The Chronology of the Early Christian Monuments of Scotland', *Proc Soc Antiq Scot*, 74 (1939–40), 60–116.
- Curle, Cecil L 1982 *The Pictish and Norse Finds from the Brough of Birsay 1934–74*. Edinburgh. (= *Soc Antiq Scot Monogr* 1.).
- Danielsson, K & Werner, G 1973 'Sten Materialet', in Ambrosiani, B *et al* 1973, 231–4.
- Davidson, D A, Jones, R L & Renfrew, C 1976 'Palaeoenvironmental reconstruction and evaluation – a case study from Orkney', *Trans Inst Brit Geog*, n ser, 1 (1976), 346–61.
- Davies, J L, Hague, D B & Hogg, A H A 1971 'The Hut-settlement on Gateholm, Pembrokeshire', *Archaeol Cambrensis*, 171 (1971), 102–110.
- De Paor, L 1955 'A Survey of Scéilg Mhíchíl', *J Roy Soc Antiq Ir*, 85 (1955), 174–87.
- Demirjian, A & Goldstein, H 1976 'New systems for dental maturity based on seven and four teeth', *Annals of Human Biology*, 3 (1976), 411–21.
- Demirjian, A, Goldstein, H & Tanner, J M 1973 'A new system of dental age assessment', *Human Biology*, 45 (1973), 211–27.
- Dietrichson, L & Meyer, J 1906 *Monumenta Orcadica. The Norsemen in the Orkneys and the Monuments they have left, with a survey of the Celtic (pre-Norwegian) and Scottish (post-Norwegian) Monuments in the Islands*. Kristiania.
- Dolley, R H M & Cormack, W F 1967 'A Hiberno-Norse Penny of Dublin Found in Wigtownshire', *Trans Dumfriesshire Galloway Natur Hist Antiq Soc*, 45 (1967), 122–5.
- Dolley, R H M & Skaare, K 1973 'To Penninger fra Harald Hardråde Funnet på Vesterhavshøyene', *Nordisk Numismatisk Unions Medlemsblad*, 8 (1973), 221–7.
- Dolley, R H M 1968 'A Viking-Age Coin of Norway Discovered in Shetland', *Proc Soc Antiq Scot*, 100 (1967–8), 193–5.

- Dryden, H E L 1870 *Ruined Churches in Orkney & Shetland* [papers from The Orcadian], 1867–70, Kirkwall. (privately produced, hand-paginated copy in The Orkney Library.)
- Dudgeon, P 1892 'Notice of St Queran's Well at Cargen, and Offerings recently made to it', *Proc Soc Antiq Scot*, 26 (1891–2), 63–5.
- Dunbar, J G & Fisher, J 1973 'Sgòr Nam Ban-Naomha ('Cliff of the Holy Women')', *Scot Archaeol Forum*, 5 (1973), 71–5.
- Edmondston, A 1809 *A view of the ancient and present state of the Zetland Islands*. Edinburgh.
- Edmondston, T 1872 'Notes of some excavations in the island of Unst', *Proc Soc Antiq Scot*, 9 (1870–72), 283–7.
- Eldjárn, K 1953 'Carved panels from Flatatunga, Iceland', *Acta Archaeol*, 24 (1953), 81–101.
- Eldjárn, K (ed) 1958 *Third Viking Congress, Reykjavik 1956*. Reykjavik.
- Fanning, T 1981 'Excavation of an Early Christian Cemetery and Settlement at Reask, Co Kerry', *Proc Roy Ir Acad*, Sect C, 81 (1981), 67–172.
- Faulkner, P A, Anderson, F W & West, I M 1975 'The Stone', in Platt & Coleman-Smith 1975, vol 2, 304–14.
- Fenton, A & Palsson, H (eds) forthcoming *Continuity and Tradition in the Northern and Western Isles*. Edinburgh.
- Fenwick, V 1978 *The Graveney Boat: a Tenth Century Find From Kent*. Oxford. (= *Brit Archaeol Rep*, 53.)
- Gelling, P S 'Excavations at Skaill, Deerness, Orkney', in Fenton, A & Palsson, H (eds).
- Gillies, W A 1929 'Notes on Old Wells and a Stone Circle at Kenmore', *Proc Soc Antiq Scot*, 59 (1924–5), 75–8.
- Gomme, G L (ed) 1886 *Archaeology*, vol 2, Gentleman's Magazine Library, London.
- Goodall, W (ed) 1759 *John de Fordun, Scotichronicum Geniunum*, 2 vols. Edinburgh.
- Graham-Campbell, J A 1976 'The Viking-age silver and gold hoards of Scandinavian character from Scotland', *Proc Soc Antiq Scot*, 107 (1975–6), 114–35.
- Graham-Campbell, J A 1980 *Viking Artefacts*. London.
- Grant, W 1933 'Further Burials at Blowes, Deerness, Orkney', *Proc Soc Antiq Scot*, 67 (1932–3), 343–5.
- Grieg, S 1940 *Viking Antiquities in Scotland*. Oslo. (= *Viking Antiquities in Great Britain and Ireland*, ed Shetelig, H, vol 2.)
- Gunn, J 1932 *Orkney. The Magnetic North*. Edinburgh.
- Gunn, J (ed) 1909 *The Orkney Book. Readings for Young Orcadians*. London and Edinburgh.
- Hague, D B 1974 'Some Welsh Evidence', *Scot Archaeol Forum*, 5 (1974), 17–35.
- Hamilton, J R C 1956 *Excavations at Jarlshof, Shetland*. Edinburgh.
- Hamilton, J R C 1968 *Excavations at Clickhimin, Shetland*. Edinburgh.
- Heald, A P 1977 *The Geology of the Deerness Peninsula, Orkney*. B Sc dissertation, Dept of Geology, Univ of Durham.
- Hedges, J W 1983 'Trial excavations on Pictish and Viking settlements at Saevar Howe, Birsay, Orkney', *Glasgow Archaeol J*, 10 (1983), 73–124, fiche M 40–102.
- Henderson, I 1975 'Pictish archaeological sites,' in MacNeill, P & Nicholson, R (eds) 1975, 11–13.
- Hillson, S W 1978 *Human biological variation in the Nile Valley, in relation to environmental factors*, Ph D thesis, Univ of London.
- Hope-Taylor, B 1977 *Yeavinger. An Anglo-British centre of early Northumbria*. London.
- Hunter, J R & Morris, C D 1981 'Recent Excavations at the Brough of Birsay, Orkney', in Bekker-Nielsen *et al* (eds) 1981, 245–58.
- Hunter, J R & Morris C D 1982 'Appendix: Excavation of Room 5, Brough of Birsay: Clifftop Settlement 1973–4,' in Curle, C L 1982, 124–38.
- Hunter, J R 1983 'Recent Excavations on the Brough of Birsay', *Orkney Heritage*, 2 (*Birsay: A Centre of Political and Ecclesiastical Power*), 152–170.
- Johnston, A W 1908 'Jo Ben', *Orkney and Shetland Miscellany*, I, *Old-Lore Ser*, I, 1907–8, Viking Club, London, 300–2.
- Keatinge, T H & Dickson, J H 1979 'Mid-Flandrian changes in vegetation on Mainland Orkney', *New Phytol*, 82 (1979), 585–612.
- Krogh, K H 1967 *Viking Greenland*. Copenhagen.
- Krogh, K J 1975 'Seks Kirkjur Heima a Sandi', *Mondul*, 2 (1975), 21–54.

- Laing, L R 1974 *Orkney and Shetland: An Archaeological Guide*. Newton Abbot.
- Laing, L R 1975 *The Archaeology of Late Celtic Britain and Ireland c 400–1200 AD*. London.
- Lamb, R G 1973 *Coastal fortification and settlement of North Atlantic Britain*, Ph D thesis, Dept of Ancient Hist and Archaeol, Univ of Birmingham.
- Lamb, R G 1974a 'Coastal Settlements of the North', *Scot Archaeol Forum*, 5 (1974), 76–103.
- Lamb, R G 1974b 'The Cathedral of Christchurch and the monastery of Birsay', *Proc Soc Antiq Scot*, 105 (1972–4), 200–5.
- Lamb, R G 1976 'The Burri Stacks of Culswick, Shetland, and other paired stack settlements', *Proc Soc Antiq Scot*, 107 (1975–6), 144–54.
- Lamb, R G 1980 *Sanday and North Ronaldsay, Orkney Islands Area. The Archaeological Sites and Monuments of Scotland*, 11, RCAHMS, Edinburgh.
- Lang, J T 1974 'Hogback Monuments in Scotland', *Proc Soc Antiq Scot*, 105 (1972–4), 206–35.
- Lawler, H C 1925 *The Monastery of St Mochaio of Nendrum*. Belfast.
- Le Patourel, H E J 1973 *The Moated Sites of Yorkshire*. London. (= *Soc Med Archaeol Monogr*, 5.)
- Linklater, E 1971 *Orkney and Shetland. An Historical Geographical, Social and Scenic Survey*, 2 ed. London.
- London Museum 1940 *Medieval Catalogue*. London.
- Long, C D 1975 'Excavations in the Medieval City of Trondheim', *Medieval Archaeol*, 19 (1975), 1–32.
- Low, G 1879 *A Tour through the Islands of Orkney and Schetland . . . in 1774*. Kirkwall.
- Lowe, C E forthcoming Aspects of the Church Archaeology of Orkney, Shetland and the Isle of Man: An Archaeological Study, for Ph D thesis, Dept of Archaeol, Univ of Durham.
- MPBW 1967 *Ancient Monuments in Scotland, A List . . . corrected to 30th September, 1966*. Edinburgh.
- MacBeath, J M 1892 *The Orkneys in Early Celtic Times. Two Lectures*. Kirkwall.
- MacDonald, A D S & Laing, L R 1975 'Excavations at Lochmaben Castle, Dumfriesshire', *Proc Soc Antiq Scot*, 106 (1974–5), 125–57.
- MacDonald, G 1916 'Note on Two Hoards of Coins buried about 1800', *Proc Soc Antiq Scot*, 50 (1915–16), 275–8.
- MacDonald, G 1936 'Note on "Jo Ben" and the Dwarfie Stane', *Proc Soc Antiq Scot*, 70 (1935–6), 230–6.
- MacFarlane, W 1908 *Geographical collections relating to Scotland*, 3 vols. Edinburgh. (= *Scot Hist Soc publications*, nos 51–53, ed Mitchell, A & Clark J T.)
- MacGibbon, D & Ross, T 1896 *Ecclesiastical Architecture of Scotland from the earliest Christian times to the Seventeenth Century*, vol 1. Edinburgh.
- MacGregor, A 1982 *Anglo-Scandinavian Finds from Lloyds Bank, Pavement, and Other Sites*. London. (= *The Archaeology of York*, vol 17: *The Small Finds*, Fascicule 3.)
- McKern, T W & Stewart, T D 1957 *Skeletal age changes in young American males*. Headquarters Quartermaster Research and Development Command, Technical Report, Natick, Massachusetts.
- MacKie, E W 1975 *Scotland: An Archaeological Guide from earliest times to the 12th century AD*. London.
- MacNeil, P & Nicholson, R (eds) 1975 *An Historical Atlas of Scotland c AD 400–1600*. St Andrews.
- McPherson, J. M 1929 *Primitive Beliefs in the North-East of Scotland*. London.
- Marwick, E W 1975 *The Folklore of Orkney and Shetland*. London.
- Marwick, H [M] 1923 'Celtic Place-Names in Orkney', *Proc Soc Antiq Scot*, 57 (1922–3), 251–65.
- Marwick, H [M] 1924 "'A Description of Orkney" (1773). An Account of an Unpublished Manuscript of Rev George Low, Minister of Birsay, 1774–1795', *Proc Ork Antiq Soc*, 2 (1923–4), 47–58.
- Marwick, H [M] 1926 Footnote 1, in Mooney 1926, 25.
- Marwick, H. [M], [The Secretary] 1929 'Urn Burial in Deerness', *Proc Ork Antiq Soc*, 8 (1928–9), 75–6.
- Marwick, H [M] 1951 *Orkney*. London.
- Marwick, H [M] 1952a *Orkney Farm Names*. Kirkwall.
- Marwick, H M 1952b *Ancient Monuments in Orkney*. Edinburgh.
- Mitchell, A 1862 'On various superstitions in the North-West Highlands and Islands of Scotland, especially in relation to Lunacy', *Proc Soc Antiq Scot*, 4 (1861–2), 251–88.
- Moar, N T 1969 'Two pollen diagrams from the Mainland, Orkney Islands', *New Phytol*, 68 (1969), 201–8.

- Moir, D G 1973 'A History of Scottish Maps, in *The Early Maps of Scotland to 1850*, by a Committee of the Royal Scottish Geographical Society, 3rd ed, Pt I (1–156). Edinburgh.
- Mooney, H. L 1966 'Norse Invasion and Rule', in Shearer, J *et al* (eds) 1966, 8–16.
- Mooney, J 1923 *Eynhallow. The Holy Island of the Orkneys*. (2 ed 1976.) Kirkwall.
- Mooney, J 1926 'Deerness: its Islands', *Proc Ork Antiq Soc*, 4 (1925–6), 25–9.
- Moore, D T & Oakley, G E 1979 'The Hones', in Williams, J H 1979, 280–3.
- Moorrees, C F A, Fanning, E A & Hunt, E E 1963 'Age variation of formation stages for ten permanent teeth', *J Dental Res*, 42 (1963), 1490–1502.
- Morris, C D 1976 'Brough of Deerness, Orkney', *Excavations 1975: Interim Report*, *Northern Stud*, 7/8 (1976), 33–7.
- Morris, C D 1977 'The Brough of Deerness, Orkney: a new survey', *Archaeol Atlantica*, 2 (1977), 65–79.
- Morris, C D 1978a 'Brough of Deerness, Orkney. Interim Report on Excavations and Survey 1976–7', *Northern Stud*, 11 (1978), 16–19.
- Morris, C D 1978b 'Excavations at the Brough of Deerness, Orkney', *Univ of Durham Archaeol Reps for 1977*, 26–28.
- Morris, C D forthcoming 'The Brough of Deerness in its setting', *Proc Sanday Conf*, forthcoming. Kirkwall.
- Morris, C D, Emery, N, Owen, O A, Rains, M J & Watt, H M forthcoming 'Skail, Sandwick, Orkney: preliminary investigations of a mound-site near Skara Brae', *Glasgow Archaeol J*, forthcoming.
- Murray, J K R & Stewart, B H I H 1972 'The Scottish copper coinages, 1642–1697', *Brit Num J*, 41 (1972), 105–35.
- Mykura, W, Flinn, D & May, F 1976 *British Regional Geology. Orkney and Shetland*. Edinburgh.
- NSA 1843 *The New Statistical Account of Scotland by the Ministers of the Respective Parishes . . .*, 15 vols. Edinburgh & London.
- N[eale], Rev J M 1848 *Ecclesiological Notes on the Isle of Man, Ross, Sutherland, and the Orkneys; or, a summer pilgrimage to S Maughold and S Magnus*. London.
- Nelson, J B 1978 *The Suiiidae; Gannets and Boobies*. Oxford.
- OSA 1799 *The [Old] Statistical Account of Scotland. Drawn up from the Communications of the Ministers of the Different Parishes*, Compiled by Sir John Sinclair, 21 vols, Edinburgh, 1791–99.
- OSA 1978 *The [Old] Statistical Account of Scotland 1791–1799*, Edited by Sir John Sinclair, reprint, 20 vols, Wakefield.
- O'Kelly, M J 1858 'Church Island near Valencia, Co Kerry', *Proc Roy Ir Acad*, sect C, 59 (1958), 57–136.
- O'Kelly, M J 1974 'Monastic Sites in the West of Ireland', *Scot Archaeol Forum*, 5 (1974), 1–16.
- Olsen, O & Crumlin-Pedersen, O 1967 'The Skuldelev Ships (II)', *Acta Archaeol*, 38 (1967), 73–174.
- O'Neil, H E 1964 'Excavations of a Celtic Hermitage on St Helen's, Isles of Scilly, 1956–58', *Archaeol J*, 121 (1964), 40–69.
- Ordnance Survey Record cards, held in Edinburgh (NMRS).
- Orkney Archive D31/3/4. Notes on coins found at Deerness, compiled by E W Marwick, Kirkwall.
- Oswald, A 1975 *Clay Pipes for the Archaeologist*. Oxford. (= *Brit Archaeol Rep*, 14.)
- Pearson, T H 1968 'Feeding Biology of seabird species breeding on the Farne Islands, Northumberland', *J Animal Ecol*, 37 (1968), 521–52.
- Peglar, S 1979 'A radiocarbon-dated pollen diagram from Loch of Winless, Caithness, N E Scotland', *New Phytol*, 82 (1979), 245–63.
- Petrie, G Ms notebooks preserved in NMAS.
- Phillips, C W 1940 'The Excavation of the Sutton Hoo Ship-Burial', *Antiq J*, 20 (1940), 149–202.
- Platt, C & Coleman-Smith, R 1975 *Excavations in Medieval Southampton, 1953–69*, 2 vols. Leicester.
- Posnansky, M 1956 'The Pagan-Danish Barrow Cemetery at Heath Wood, Ingleby: 1955 Excavations', *J Derby Archaeol Soc*, 76 (1956), 40–56.
- Prentice, H C & Prentice, I C 1975 'The hill vegetation of North Hoy, Orkney', *New Phytol*, 75 (1975), 313–67.
- RCAMS 1946 Royal Commission on the Ancient and Historical Monuments of Scotland, *Twelfth Report with an Inventory of the Ancient Monuments of Orkney and Shetland*, 3 vols. Edinburgh.
- RCHAMW 1925 Royal Commission on the Historic and Ancient Monuments of Wales, vol 7, *Inventory of the County of Pembroke*. Cardiff.

- Radford, C A R 1959 *The Early Christian and Norse Settlements at Birsay*. Edinburgh.
- Radford, C A R 1962a 'The Celtic Monastery in Britain', *Archaeol Cambrensis*, 111 (1962), 1–24.
- Radford, C A R 1962b 'Art and Architecture: Celtic and Norse', in Wainwright, F T (ed) 1962, 163–87.
- Rendall, R 1934 'Notes on an underground chamber at South Keigar, Deerness', *Proc Ork Antiq Soc*, 12 (1933–4), 26–8.
- Reykjavik Museum 1981 *Árbaejarsafu*. Reykjavik.
- Reykjavik Museum 1982 *Torfbaerinn frá elda skála til Burstabaejar*. Reykjavik.
- Ritchie, Anna 1977 'Excavation of Pictish and Viking-age farmsteads at Buckquoy, Orkney', *Proc Soc Antiq Scot*, 108 (1976–7), 174–227.
- Ritchie, J N G & Lane, A M 1980 'Dun Cul Bhuirg, Iona, Argyll', *Proc Soc Antiq Scot*, 110 (1978–80), 209–29.
- Robinson, P H 1972 'The Dunchurch and Stafford Finds of Eighteenth-Century Halfpence and Counterfeits', *Brit Num J*, 41 (1972), 147–58.
- Rousell, A 1941 *Farms and Churches in the Medieval Norse Settlement*. Copenhagen. (= *Meddelelser om Grønland*, 89.)
- Saxby, J M E 1905 'Sacred sites in a Shetland isle', *The Antiquary*, 41 (1905), 133–8.
- Scott, H 1871 *Fasti Ecclesiae Scoticae*. . . . 6 vols. Edinburgh.
- Scott, J H & Symons, N B B 1974 *Introduction to Dental Anatomy*, 5 ed. Edinburgh.
- Scott, A B 1917 *The Pictish Nation. Its People and its Church*. Edinburgh and London.
- Scott, A B 1926 'The Celtic Church in Orkney', *Proc Ork Antiq Soc*, 4 (1925–6), 45–56.
- Shearer, J, Groundwater, W & Mackay, J D (eds) 1966 *The New Orkney Book*. London.
- Shotton, F W (ed) 1977 *British Quaternary Studies: Recent Advances*. Oxford.
- Simpson, W D 1968 *The Ancient Stones of Scotland*, 2 ed. London.
- Skjølsvold, A 1961 *Klebersteinsindustrien i Vikingetiden*. Oslo-Bergen.
- Small, A 1973 'The site: its history and excavation', in Small, A *et al* 1973, vol 1, 1–7.
- Small, A, (ed) 1965 *The Fourth Viking Congress, York, August 1961*. Edinburgh & London. (= *Aberdeen Univ Stud*, 149.)
- Small, A, Thomas A C & Wilson, D M 1973 *St Ninian's Isle and its Treasure*, 2 vols. Oxford. (= *Aberdeen Univ Stud*, 152.)
- Smith, J Cromarty 1921 'Early Christian Remains in Orkney and Shetland', *Trans Scottish Ecclesiol Soc*, 6 (1920–1), 103–18.
- Soc Antiq Scot 1866 Donations to the Museum [31 Jan 1865], *Proc Soc Antiq Scot*, 6 (1864–6), 41–6.
- Soc Antiq Scot 1883 Donations to the Museum and Library (12 February 1883); *Proc Soc Antiq Scot*, 17 (1882–3), 136–41.
- Soc Antiq Scot 1889 Purchases for the Museum [28 April to 30 November 1888], *Proc Soc Antiq Scot*, 23 (1888–9), 7–23.
- Soc Antiq Scot 1892 *Catalogue of the National Museum of Antiquities of Scotland*, new ed. Edinburgh.
- Soc Antiq Scot 1946 Donations to and Purchases for the Museum, 1945–6, *Proc Soc Antiq Scot*, 80 (1945–6), 151–6.
- Soc Antiq Scot 1950 Donations to and Purchases for the Museum, 1949–50, *Proc Soc Antiq Scot*, 84 (1949–50), 227–34.
- Soc Antiq Scot 1970 Donations to and Purchases for the Museum, 1969–70, *Proc Soc Antiq Scot*, 102 (1969–70), 295–8.
- Spence, M 1903 'Deerness Kirk' [Report of the District Secretary], *Saga Book of the Viking Club*, 3 (1901–3), 312–14.
- Steedman, K A 1980 *The Archaeology of the Deerness Peninsula, Orkney*, BA dissertation, Dept of Archaeol, Univ of Durham.
- Stevenson, R B K 1959 'The "Stirling" Turners of Charles I', *Brit Num J*, 29 (1959), 128–51.
- Stevenson, R B K 1966 *Sylloge of the Coins of the British Isles, Edinburgh (National Museum of Antiquities)*, I. London.
- Stevenson, R B K 1972 'The Lochgelly Find', *Brit Num J*, 41 (1972), 183.
- Taylor, A B 1931 'Some Saga Place-Names', *Proc Ork Antiq Soc*, 9 (1930–1), 41–45.
- Thomas, A C 1967 'An Early Christian cemetery and chapel on Ardwall Isle, Kirkcudbright', *Med Archaeol*, 11 (1967), 127–88.
- Thomas, A C 1971 *The Early Christian Archaeology of North Britain*. Oxford.

- Thomas, A C 1973 'Sculptured stones and crosses from St Ninian's Isle and Pabil', in Small, A *et al* 1973, 8–44.
- Thompson, M W 1967 *Novgorod the Great. Excavations at the Medieval City directed by A V Artsichovsky and B A Kolchin*. London.
- Thompson, W P L 1978 Introduction to reprint of *The Statistical Account of Scotland 1791–99*. Edited by Sir John Sinclair, vol xix, Orkney and Shetland, ix–xxxiv. Wakefield.
- Tudor, J. R 1883 *The Orkneys and Shetland; Their Past and Present state*. Kirkwall & Lerwick.
- Van Es, W A & Verwers, W J H 1980 *Excavations at Dorestad, I, The Harbour: Hoogstraat 1*. Amersfoort. (=ROB *Nederlandse Oudheden*, 9.)
- Wainwright, F T 1962 'Picts and Scots', in Wainwright, F T (ed) 1962, 91–116.
- Wainwright, F T (ed) 1962 *The Northern Isles*. Edinburgh and London.
- Wallace, J 1693 *A Description of the Isles of Orkney*. Edinburgh.
- Wallace, J 1883 *A Description of the Isles of Orkney, Reprinted from the Original Edition of 1693 . . . together with the additions made by the Author's Son in the Edition of 1700* [ed Small, J]. Edinburgh.
- Ward-Perkins, J B 1940 'Bronze Jugs and Cooking Vessels', in London Museum 1940, 199–207.
- Webster, L E & Cherry, J 1972 'Medieval Britain in 1971', *Med Archaeol*, 16 (1972), 147–212.
- Welander, R D E 1980 *Traigh Na Berie, Kneep, Valtos, Isle of Lewis. A Conservation Study of Viking Age Grave Finds from the Outer Hebrides*, Dip Archaeol Conserv dissertation, Dept of Archaeol, Univ of Durham.
- Wendland, W M & Donley, D L 1971 'Radiocarbon-Calendar age relationship', *Earth & Planetary Science Letters*, 11 (1971), 135–9.
- Wickham-Jones, Caroline & Collins, G H 1978 'The Sources of Flint and Chert in Northern Britain', *Proc Soc Antiq Scot*, 109 (1977–8), 7–21.
- Williams, F 1979 'Excavations on Marefair, Northampton, 1977', *Northamptonshire Archaeol*, 14 (1979), 39–79.
- Williams, J H 1979 *St Peter's Street, Northampton. Excavations 1973–6*. Northampton.
- Wilson, D M & Hurst, D G 1961 'Medieval Britain in 1960', *Medieval Archaeol*, 5 (1961), 309–39.
- Wilson, D M & Hurst, D G 1965 'Medieval Britain in 1964', *Medieval Archaeol*, 9 (1965), 179–220.
- Wilson, D M & Hurst, D G 1966 'Medieval Britain in 1965', *Medieval Archaeol*, 10 (1966), 168–219.
- Witherby, H F, Jourdain, F C R, Ticehurst, N F & Tucker, B W 1943 *The Handbook of British Birds*, vol 4. London.

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